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THE VIRGINIA MEDICAL AND SURGICAL JOURNAL.

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AMICUS SOCRATES, AMICUS PLATO, SED MAGIS AMICA VERITAS.

VOL. IV.

RICHMOND:

JOHN NOWLAN, PRINTER.

1855.

Med.
610.5
M39
V81

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THE

VIRGINIA

MEDICAL AND SURGICAL JOURNAL.

JANUARY 1855.

ART. I.—*Sketches of the Endemic Diseases of the Roanoke Valley of Virginia and North Carolina.* By OTIS F. MANSON, M. D.

The design of the writer of the following pages is to furnish to the young practitioner some assistance in regard to the diagnosis and treatment of the most important diseases that appear in the field of his observation, to place upon record a simple history of their peculiar phases, as presented during the past decade, and a concise description of the method of cure practised, and its results.

It perhaps, at the first glance, may seem to be a species of sectional egotism to claim a special attention for the maladies of an isolated region, in the pages of a journal of extended circulation; but the writer has satisfactory reasons for believing that the diseases prevalent in his section find their counterparts in nearly every district of the southern states, and that the system of treatment will be found equally applicable. In any event, however, there can be but little danger of error, for if the physiognomy of disease herein delineated finds not its antitype within the province of the reader, he will reasonably be deterred from the adoption of the practice proposed.

The sketches of disease here given, albeit portrayed by an unpracticed hand, are drawn, not from the stereotyped descriptions of the books,

which statue-like maintain a perpetual repose, but from the changeful forms of nature. Would that some more skilful limner had essayed the task, too long deferred for the cause of humanity and science, but in the absence of a master hand we trust that our outlines, "wild above art," and confessedly rude, will yet be found so faithfully and truthfully traced that the resemblance to the originals will be easily and readily recognized.

I. Remittent Fever.

Synonymes, Bilious Remittent Fever, Bilious Fever, &c.—Remittent fever from its serious tendency, extensive prevalence, frequent recurrence and complex nature, possesses, beyond all other diseases, a peculiar and absorbing interest to the southern physician, and although seen sporadically in a mild form in more elevated latitudes, it still may be emphatically termed the disease of southern climes. It is with this malady that the young practitioner there will be probably first called upon to combat. It is from ignorance of its nature and treatment that many an aspirant has failed to fulfil the prophecies of his young ambition; and veterans, victorious in many conflicts with disease, unmindful of the progress of therapeutics, and disclaiming the teachings of a new philosophy, have lost their well-earned laurels.

It is in this disease and its archetypes, above all others, that the efficacy and certainty of remedial agents are most evidently and conspicuously displayed. It is in view of our brilliant and decisive triumphs in its treatment that hydra-headed charlatanry recoils dismayed before the genius of orthodox science; that the skeptic is compelled to admit that "his doubts are traitors," and the loftiest intellects and meanest minds are alike impressed with the might and majesty of our divine art.

> "Homines ad Deos nulla re proprius
> Accedunt, quam salutem hominibus dando."

Impressed, therefore, as he soon must become, with the vast importance of an intimate acquaintance with this affection, the young physician will learn with astonishment, that there cannot be found in any standard work a correct description of its characteristic features as it now presents itself, or safe and reliable rules for its treatment. It is true that, scattered through the pages of the journals, many invaluable articles are to be found, but they are not generally accessible, and if

they were, it would be a difficult task for a novice to separate the true from the false, and to form a definite and correct opinion from their scattered and discordant materials. It is deeply to be regretted that this deficiency in our literature exists, and it is from a desire to contribute something to supply it that this article is penned.

GENERAL CHARACTER.

Mild Remittent Fever, Synonymes, Chill and Fever, Congestive Chills, &c.

Prodromic Stage.—The onset of this fever is generally *sudden*, and in cases where premonitory symptoms are present, they are usually of brief duration. The patient has an irrepressible foreboding of evil, is languid, inclined to be drowsy and disinclined to exertion. He experiences fugitive pains in his head, neck, loins and limbs, and sensations of chilliness are felt running along the spine, and from thence irradiating to the extremities, succeeded by flushes of heat. The appetite fails or is capricious; the tongue is slightly covered with a white fur; the bowels are generally costive, occasionally alternating with diarrhœa; the urine is copious and limpid, and there is frequent micturition, attended with a sensation of heat in the urethra.

The Invasion.—This is almost invariably ushered in with a chill, the sensation of cold varying from the production of an evanescent tremour, to a distinct and prolonged rigour, *which may occur at any hour of the day or night.* This INITIAL chill is commonly felt sensibly by the patient however, and the reduced temperature of the extremities especially, is evident to the touch of the attendant. The patient is restless, sometimes amounting to extreme jactitation. He is thirsty, and complains of a sensation of internal heat; his breathing is accelerated, unequal, and interrupted with sighs; the pulse is frequent, small, and sometimes irregular; pain in some region of the head is usually present, as well as the spine, the latter sometimes very distressing, and constituting the principal suffering of the patient; nausea and vomiting are occasional symptoms, but according to my observation not so generally present as it is usually stated. This stage is commonly of short duration and is soon followed by decided reaction.

The Exacerbation.—The skin now becomes hot and dry, the face flushed, and a roseate glow is perceptible over the general surface. The sclerotica is infected and the globe of the eye prominent. The

cerebro-spinal pains increase in intensity and assume a throbbing character. The pulse acquires volume, force and regularity, but is almost invariably *compressible.* The respiration becomes slower, more uniform and less laborious. The tongue becomes dryer and more coated, and the secretions of the mouth viscid and tenacious; the thirst continues, but is not usually so urgent as in the chill. These symptoms increase in intensity until they amount to an acme of exquisite suffering, and then gradually decline.

The Remission.—Late in the afternoon, usually betweeen the hours of 5 and 8 in very mild cases, but postponed to some period between midnight and sunrise, in more severe attacks, the fever and its concomitants sensibly begin to yield, and the patient sinks exhausted with suffering into a slumber of variable duration, from which he awakes more or less relieved. The skin becomes cooler and relaxed, the tongue moist; the painful sensations abate, and often entirely vanish; the respiration becomes free, and the pulse diminished in frequency and force. This respite from suffering is usually however of short duration, being followed by the recurrence of the stage of congestion or chill. As the *succeeding chills* however differ in some important features from the initial chill we devote to them an especial notice.

The Chill of Remittent Fever.—This, according to my observation, never occurs between the hours of 9 P. M. and the rising of the sun of the following day, but usually between the hours of 8 A. M. and 12 M. and occasionally between 6 and 8 P. M.

At or near these periods, the watchful attendant will perceive a sensible diminution of temperature of the extreme parts, viz. the nose, toes and fingers, or the whole hands and feet will be found below the natural standard, being cool and damp, *the rest of the surface retaining its frebrile heat* more evident in the cerebro-spinal and epigastric regions. In this condition, the patient rarely complains of any sensation of cold, but often of heat, desires to be fanned, the clothing to be removed, and entreats for cold drinks. The pulse is frequent, but usually regular; the bowels torpid, but easily excited into action. Nausea and vomiting are sometimes present, the fluids ejected from the stomach being usually of a bilious character. The respiration is not much affected, but the patient yawns and gapes, utters deep sighs, alternating with forcible voluntary expirations, with a whistling sound. The duration of this stage is usually brief, rarely lasting more than an hour, and is succeeded by the reaction, which is marked by an extension of

of the febrile heat over the whole surface, and a repetition of the symptoms of the first exacerbation just described. As the disease advances, the pulse becomes increased in frequency, quickness and tension, but diminished in volume. Evidences of organic irritation, usually referrable to the abdominal organs become developed. The tongue becomes more coated and acuminated, with a perceptible redness at its extremity and on its edges. More or less tenderness or abdominal pressure will now be felt, with gastric and intestinal irritability, attended in some instances with an intolerable burning pain most intensely felt during the chill. Percussion will generally detect an increase in the size of the spleen, and later the hypertrophy becomes obvious to the eye, particularly when the patient is in a sitting posture. Diarrhœa may now make its appearance, but generally its occurrence is postponed to a more advanced period; but it now may be observed that aperients of the mildest kind are prone to produce intestinal spasm and hypercatharsis, particularly near the chill period. The disease now progresses with aggravation of the cerebral and gastro-enteric symptoms, until from the third to the fifteenth day; it usually terminates without the interference of art, in three modes to be described under the following heads:

1st. *In Grave Remittent.*
2d. *In Adynamic Remittent.*
3d. *Intermittent Fever.*

Type.—It will be seen from this sketch of the disease, as it usually appears, that its common type is *Quotidian*, but owing to the fact that in many cases, the exacerbations of the alternate days correspond with each other in presenting more violent reaction, and the intermediate paroxysms being milder, the majority of writers have assumed it to be of the tertian or double-tertian type. This, we think, is erroneous; for close observation on the part of the physician, will almost invariably detect its quotidian character, as evinced by the diurnal occurrence of the stage of congestion already described. In very few instances have we failed to discover it; indeed, it often happens that the sensations of chilliness and coolness of the extreme parts, are more perceptible when preceding the mild exacerbation, than previous to the more intense reaction of the alternate paroxysm.

OCCASIONAL SYMPTOMS.

Delirium is sometimes present in the exacerbation, chiefly observed

in children, and adults of a nervo-sanguineous temperament, but it is usually mild, of brief duration, declining with the fever, and disappearing entirely before the subsequent chill. Sometimes, however, it is violent, fierce and protracted, forming apparently an alarming and dangerous feature; even in those cases, however, it almost invariably disappears before the next paroxysm, thereby betraying the periodical nature of the affection. The passive, persistent delirium common to continued fever, is only seen at the termination of protracted cases, when it has assumed the adynamic character.

Coma is occasionally observed. Children and aged persons often manifest it in a partial manner, by a somnolent tendency in the exacerbation. In the latter class of patients, it is sometimes complete and protracted. The patient lies on his back, with the eyelids opened, with a dull, fixed vacant stare. The breathing and pulse are not much accelerated, and may be entirely normal. The bowels are quiet, but the patient has copious, frequent and involuntary discharges of urine. He utters no articulate sound, and the function of deglutition seems to be lost. He receives fluids into his mouth, but does not betray any perception of savours; for all kinds are indiscriminately spat out in a perfectly natural manner, save without any reference to the place of deposit. These symptoms all disappear in the remission, and under proper treatment cannot be considered of very grave omen.

Convulsions sometimes occur in hysterical females and children; they are usually of brief duration, and even in the latter class of patients, are rarely a source of danger, in our experience, when they take place in the early part of an attack. Occurring, however, in the latter stages of protracted cases, they may be considered as very fatal symptoms.

Remittent Fever of Puerperal Women.—We desire to call the special attention of the young practitioner to the peculiar phenomena presented in this fever, when occurring in females soon after *accouchment.* It may be regarded as an etiological axiom, that whatever tends to prostrate the nervous, or deplete the vascular systems, renders the organism strongly predisposed to endemic or epidemic influences. In puerperal women, both of these conditions unfortunately exist, and it is not, therefore, surprising that they should be often attacked with this affection. The patient is generally seized with a chill, which may be mistaken for the usual rigour after parturition, or that introductory to the febris lactea. This is soon, however, followed by an unusual, in-

tense and prolonged reaction. The secretion of milk, if existing, is arrested, and the lochial discharge is partially or completely suspended. Intense dorsal and abdominal pains are experienced, and the uterus becomes evidently enlarged, rising above the pubis and very tender on pressure. As the exacerbation declines, the suffering abates, and the lochia may partially reappear in the remission, which is usually quite evident. Close observation will soon thereafter detect the coolness of the extreme parts antecedent to a second paroxysm, which is attended with augmented spinal and abdominal pain and tenderness. Increase of the uterine tumour ensues, the abdomen becomes tympanitic and will not bear the slightest pressure. The tongue becomes red, or red on its edges, and brown or black in its centre. Obstinate vomiting ensues; colliquative diarrhœa sets in, and coma or convulsions close the scene. It is clearly evident from these symptoms, that this complication may be mistaken for puerperal fever. As far as the local symptoms and functional disturbances are concerned, the analogy is very evident, with this important distinction, however, that the local symptoms and the lesions of which they are the exponents, are the consequences and not the cause of the febrile disturbance. The paroxysmal character of the case, as shown by the marked remissions and exacerbations of fever, the regular increase and abatement, *pari passu*, of the local symptoms, and the phenomena pertaining to the stage of congestion, will generally enable the observant physician to lift the mask from the features of the case, and to discern its distinctive character. Discomfiture to himself and death to his patient will probably result, if, erring in discrimination, he resorts to the usual antiphlogistic treatment of puerperal peritonitis, whilst on the other hand, by the adoption of the proper means, the disease may be generally arrested. Concerning no disease, perhaps, are more antagonistic views promulgated than in regard to the nature and treatment of puerperal fever. In the opinion of the writer, these discrepancies can only be explained by the fact that, although the disease as it presents itself to different observers, is similar in its general features, yet, owing to epidemic influence, and in some instances, a specific contagious miasm, it differs widely in its symptoms and causes, and requires as equally different modes of treatment.

Adynamic Remittent.

Remittent fever of a low grade and persistent character, strongly simulating continued fever, may present itself as a *sequel* to neglected

or mismanaged cases of the ordinary form of the disease, or may occur *primarily.* Its approach is commonly, however, less abrupt than the usual form, the invasion being often unattended by a decided chill. In other respects the prodromiæ do not differ essentially from an ordinary attack. The pulse is of moderate frequency, not usually exceeding 100 per minute in adults. The exacerbations and remissions are indistinctly marked, the pulse in many cases varying only 8 or 10 beats in 24 hours. The heat of skin is moderate, and very often attended with some moisture during the greater period of the attack. When the disease is fully formed, the tongue becomes more or less pointed and red at its top and on its edges, with a brown fur on its dorsum. The patient does not usually experience much acute pain. A dull headache, but not continuous, together with some abdominal uneasiness are generally present. Diarrhœa sometimes occurs, and although it may be absent, a tendency towards it is manifested by a morbid susceptibility to the action of cathartics; the mildest aperients producing severe tormina, and frequent, copious serous discharges. As the disease advances, the tongue becomes dry, brown and even black, or parting with its coat, it presents a clean, red, shining surface. The abdomen becomes tympanitic, tense, and tender to the lightest touch, or as in some cases, although enlarged, yet it is soft, its walls yielding to the weight of the viscera; the skin being wrinkled, dry and desquamating, and the separate and relaxed muscular fibres imparting a sensation to the hand, as if the cavity was filled with lumbrici. The mind is usually clear in the first stages; as the disease advances, however, the intellect yields. Continuous muttering delirium, colliquative diarrhœa, and sometimes intestinal hæmorrhage supervene, (the blood in the latter instance, being fluid, uncoagulable and horribly offensive,) under which the patient soon succumbs.

Grave Remittent Fever.

Synonymes, Congestive Fever, Pernicious Fever, Algide Fever.— We now proceed to describe a grade of remittent fever, that may be justly ranked with the most fearful and fatal scourges which afflict humanity. In the phases of this affection predescribed, nature seems to have resisted the action of the morbific cause with energy and promptness, but in this, the vital power seems overwhelmed and powerless, and unassisted, too often surrenders.

Grave remittent may occur as a primary form of disease, occurring suddenly, without premonition, or as more generally the case in this region, it commences with the symptoms of mild remittent or intermittent fever, when either from its natural cause, or more frequently from exposure or improper treatment, such as ill-timed depletion or purgation, it suddenly presents the grave and alarming symptoms which characterize it, the most conspicuous of which are a prolonged cold stage, and failure or disappearance of the pulse. The symptoms, however, in other respects often widely vary, and in my opinion may be classed under three heads, viz: Those referrable to and arising from a perverted action of different portions of the cerebro-spinal axis, as follow: 1st. Symptoms arising from congestion of the cerebrum. 2dly. Those arising from congestion of the cerebellum, pons variolii and medulla oblongata; and 3dly. Those arising from congestion of the spinal cord. We deem it proper, however, to describe the symptoms usually present in all of these modifications. The phenomena which forcibly arrest the attention of the observer, are those presented by the state of the skin and the pulse. The patient is cold, the features are sharp and shrunken, and the surface shrivelled. In some cases he is merely pale, but in the worst cases the skin is of a dusky, purplish hue. It may be dry, but usually it is damp, or even wet with exhalation, which is sometimes glutinous in its character. It may be deficient in sensibility to such an extent that the common external irritants, such as rubefacients, sinapisms, and blisters, produce no impression. This condition of the skin may exist over the whole body, but usually within my observation, it does not pervade the trunk, being confined to the upper and lower extremities, the nose, cheeks and ears, the rest of the head and the body being of febrile heat. The pulse is very frequent and small, and in some rare instances disappears entirely from the wrist.

The respiration is more or less disturbed. The patient complains of a sense of oppression about his chest, he sighs often, suffers from sensations of internal heat, demands cold drinks, desires to be fanned, and strenuously objects to any covering being placed on his clay-cold limbs. The cardiac sounds and impulse are normal, and in some cases more distinct than in health, where the *coldness* of the surface is confined to the *extreme parts*, but when it pervades the whole periphery, the sounds and impulse are indistinct and feeble. The strength of the patient is

often remarkable, so that he is able to assist himself, and even to walk about his room for some time. Diarrhœa is sometimes present, but is not a constant symptom. The duration of the cold stage varies very much, but it rarely continues beyond 8 or 10 hours; it however may endure much longer.

The Exacerbation.—The reaction may be perfect or partial. The heat gradually returns to the surface and extends to the extremities, the pulse becomes less frequent and more expanded, the breathing becomes disembarrassed; the symptoms common to the milder grade being present in ratio with the development of the febrile action. This stage endures from 10 to 24 hours and is succeeded by the stage of congestion, which in turn yields to a reaction more or less distinct, or is fatal, the disease having a tendency to terminate on the 3d, 5th and 7th days mortally, or subsiding into the mild form, or in intermittent fever.

CONGESTION OF THE CEREBRUM.

The Cold Stage.—The patient may be suddenly seized with symptoms of inordinate sanguineous determination to the superior portion of the encephalon, but usually there are some premonitions. He complains of pain in the frontal region, of an acute throbbing character. The intellect is confused and wandering, and he is disposed to sleep, the drowsiness gradually increasing to coma. He seems to be in a profound sleep, but sometimes can be aroused by shaking him forcibly and calling aloud, when he may reply in monosyllables and intelligibly, but instantly sinks into stupor again. He breathes softly, regularly, and but little more frequently than in health. His extremities are cold and of a bluish tint, the coldness extending to the pelvis and axillæ, the trunk and head being of febrile warmth. In some instances the whole surface is cold, but these are rare. The skin is usually dry or but slightly moist, this variety not being usually attended with colliquative sweat. The pulse is frequent and small.

The Exacerbation.—The pulse still indicates evidences of an impeded circulation, and rarely regains its normal volume or force, the breathing becomes more accelerated, the patient grows restless, and gradually regains his faculties. He now complains of cephalic pain, of nausea, and occasionally vomits, and the whole surface becomes warm and even hot. As the exacerbation declines, the patient becomes more comfortable, and himself and friends look forward to a speedy con-

valescence, but this a deceitful calm. The cold stage recurs with aggravation of the cerebral symptoms, and increased prostration of the general powers. In some cases, however, without assistance the second cold stage assumes a mitigated character, gradually subsiding into mild remittent, or the intermittent form. When the disease however continues unabated, the third paroxysm is prone to prove fatal, but the termination may be postponed to a more advanced period.

CONGESTION OF THE CEREBELLUM, &C.

The Cold Stage.—Unlike the variety just described the intellectual functions in this are undisturbed. The patient complains of fixed pain in the occipital region, he is very restless, constantly shifts his position and complains of great difficulty of breathing, and often declares "he will die for the want of air." He experiences a distressing sense of internal heat and oppression. The respiration is irregular and laborious, the expirations being forcible and prolonged. The skin is cold, of a purple and mottled appearance, bedewed with moisture. This state of the surface is usually confined to the extremities, the remaining surface being above the natural temperature. The tongue is dusky and expanded, and in extreme cases it is cold, as well as the breath. The bowels are generally sluggish, but the urine is copious and limpid. The patient often arises from his bed, but his *gait* is *tottering* and *unsteady*, and he sometimes falls to the floor suddenly, as if stricken lifeless, but instantly arises again, thereby proving that it is not simply from *debility* that he is unable to retain the erect position, but from a *loss of control* over his *muscular movements.* The pulse is very frequent and small; nausea is not usually present, but the patient makes frequent efforts to vomit, thinking thereby to remove the thoracic oppression. Insensibility of the stomach to the action of medicine is a prominent condition in this stage, which rarely endures more than ten hours.

The Exacerbation.—The reaction gradually ensues, and in proportion to its development, the symptoms belonging to the cold stage disappear. The respiration becomes more regular and free, the pulse slower and expanded, the skin becomes warm and even hot, and the pain in the occipital region mitigated; nausea and vomiting are apt to ensue, and the stomach responds to the action of medicine readily. Without interference, the cold stage again recurs, the second paroxysm often proving fatal.

SPINAL CONGESTION.

The Cold Stage.—This is attended with symptoms of a milder character and is of shorter duration than the preceding varieties of the grave form. The spinal pain is confined to the dorsal and lumbar regions, and is not of an acute character, save when pressure is made upon the affected region. Unlike the former varieties, in this the intellect is unaffected and the respiration free.

The diminished temperature is usually confined to the extremities and rarely extends beyond the knee and elbow; nor is there usually present any superabundance of moisture, the cold surface being dry or merely damp, the remaining surface (always excepting the facial extremes) being above the natural heat. The patient (in this as in the former varieties) is ignorant of the coldness of the extremities and complains of heat, is restless and suffers *violently* from *spasmodic pain in his bowels*, which are usually costive. To such an extent are the abdominal pains present, that the disease has been mistaken for an attack of colic. The pulse is not usually much accelerated, but is irregular during the paroxysms of abdominal pain. This stage rarely exceeds one or two hours in duration.

The Exacerbation.—Although the reaction is usually decided, the fever is rarely intense. The skin becomes warm and expanded, and often moist. The pulse, unlike as occurs in the former varieties, now usually becomes *morbidly slow*, and is characteristic of this phase of remittent. This condition of the pulse, unless closely observed and counted, is apt to throw the inexperienced off their guard. I have known physicians of no mean skill, to declare the patient was but slightly ill, but who nevertheless expired in the next paroxysm. More or less tenderness will be found on pressure of the abdomen, chiefly in the umbilical region, but the spasmodic pains are always mitigated, and sometimes entirely disappear in this stage, which is more prolonged than in the other varieties. A complete remission late in the night or during the morning hours, often ensues, in which the patient sleeps quietly and presents so few marked indications of disease as to attract but little attention. The cold stages however reappears, attended with more aggravated symptoms. The abdomen becomes enlarged and exquisitely tender, and the agonizing abdominal pains return.

As the disease advances, the abdomen becomes tympanitic. Serous, or as is more often the case, hæmorrhagic discharges ensue, the

blood being black, liquid and offensive; the coldness extends over the whole surface, a clammy sweat breaks out, the features become cadaveric, and the patient sinks into coma and expires. The fatal termination is however usually postponed beyond the 7th day.

Diagnosis.

From the foregoing sketches of the various forms, grades and complications of this protean affection, it is evident that the inexperienced observer will often find much difficulty in discerning its true character. The peculiar traits of the disease in puerperal women have been already pointed out, and the various phenomena incident to the different grades described, which we hope will prove to be of some aid to discrimination in the majority of cases, but as remittent often simulates continued fever, we deem it necessary briefly to indicate the distinction.

A well-marked case of either disease would rarely be mistaken by an observer of ordinary perception, but under the head of adynamic remittent, we have endeavoured to depict a form which bears enough resemblance to typhoid fever, to be often confounded with it. Like typhoid fever, adynamic remittent may appear at any season of the year. It is rarely attended with much acute suffering, and is protracted in its duration. The resemblance is rendered more striking by the evidences of abdominal lesion in both, the tongue being inclined in either to be red and dry, and diarrhœa and meteorism being symptoms common to both. Here, however, we think the analogy ends. In remittent there is an absence of that peculiar, stupid, vacant expression, deafness, eruption and the irregular exacerbations of continued fever Epistaxis and sudamina, so commonly present in typhoid, are rare in remittent fever. The chill of remittent differs from that of any other disease whatever. In typhoid fever there is a peculiar condition of the patient, which as we have never seen described, we think it proper to notice. The patient complains of a sensation of intense cold, and in some instances will shiver as with an ague. These nervous shudderings, or instances of extreme nervous irritation as we deem them, may occur frequently during the day or night with great irregularity, disappearing for several days together, and then returning again. So far as our observation, these rigours are unattended with the slightest diminution of temperature of any part, the whole surface being rather above the normal standard, even to the most extreme parts; indeed we

have noticed these paroxysms to occur in many instances when the patients were in a warm perspiration. It is also worthy of notice, that these chills (as writers term them) are not followed by any perceptible increase of febrile excitement, which is an invariable sequent to the chill of remittent. The pulse, although frequent in both diseases, yet is attended with fluctuations so different from each other in the respective fevers, as to present a most invaluable aid in diagnosis. Cullen, Parr, Good and others, have declared that in continued fever there are two diurnal exacerbations, whilst in remittent there is only one. We have often verified the truth of their definition, and we feel assured that in doubtful cases the peculiar character of the fever will be detected by this test. The pulse should be counted at short and regular intervals throughout the day and night. If the case is continued fever, it will arise and decline twice, the first exacerbation occurring in the morning and the second in the afternoon or night. In remittent, only one exacerbation will thus be discovered.

The perspiration and urine have a peculiar odour in typhoid, which I have never observed in remittent fever. The intestinal evacuations are infinite in their varieties in both diseases, but there is a discharge of a peculiar character in the majority of cases of typhoid which I have never seen in remittent. They are of a shining, reddish brown appearance, about the consistence of molasses, and seem glutinous in their nature, adhering to the sides of the vessel, and are very offensive. The viscid, green, black, inodorous, bilious evacuations which almost certainly denote a favourable termination in remittent, I have never seen in typhoid fever. In the latter disease, healthful and perfect digestion often returns, and natural and consistent fæces are evacuated sometime before the disappearance of febrile excitement. These we have never witnessed in remittent until convalescence was established. Intestinal hæmorrhage is often present during the course of typhoid fever, but, as a rule, attends only the termination of remittent. In the former it is often salutary, the blood being of a bright red colour, coagulable and healthy in appearance. In the latter it is fluid, black and offensive, and is usually indicative of a fatal termination. I have not thought proper to recapitulate all of the diagnostic signs known, which would be proper in a treatise but supererogatory in a contribution. It is believed that the foregoing will almost invariably enable the practitioner to detect the proper character of the case.

Nature of Remittent Fever.

As we design this to be a practical paper, we purposely shun the metaphysical labyrinth to which a discussion concerning its cause inevitably tends, a controversy perhaps more protracted than profitable; but an enquiry into the conditions of the organism, as morbidly impressed, comes fully within the proper scope of the present article, as it has an important bearing on the therapeutics of the disease. The attention of the physician cannot fail to be first and most forcibly directed to the apparent unequal distribution of blood in this malady. He observes a constant tendency in the vital current to retrocede from the extremities to the trunk and head, and in grave cases, from the whole surface to the internal organs. It is true this tendency is not so conspicuous in the mild form of the disease; for there the natural powers of the system seem competent to resist successfully the centripetal tendency of the blood. The symptoms presented in the milder varieties, were therefore of a mixed or twofold character. First, those presented by the action of the morbific cause; and secondly, those displayed by the resistance of the organism against it. In the more violent form of the disease, which we have described under the name of grave remittent, the phenomena presented are those chiefly induced by the immediate agency of its cause, and furnish to the scientific observer the proper phase for the study of its pathology. It is from the symptoms therefore of this, the most perfect species of the disease, that we shall chiefly endeavour to illustrate its nature.

A person in the enjoyment, apparently, of perfect health, is suddenly, without warning or assignable cause, (as is often the case) prostrated. He is cold but knows it not, but on the contrary has all the gestures of a man oppressed with heat. The blood circulates feebly on the surface, and the cutaneous vessels seem almost to have lost their contractility, and the fluid portions of the blood exhale though their relaxed parieties. The skin is also deprived to a great extent of its sensibility, the most powerful irritants failing to produce any impression. Where is the missing blood? It has not been lost. The colliquative sweat and diarrhœa might indeed subtract from its mass, but in the gravest cases these are often absent! The vital current has passed from our immediate vision, it is true, but it must be somewhere. The axiom cannot be controverted, that in the system there is a certain quantity of blood, and if the normal quantity is absent in one part, it must necessarily be

present in excess in another. Happily the overburdened organs speak in a language not to be mistaken. The cerebral pain, the somnolence deepening into coma, with the additional symptoms pertaining to the first variety, betray the congested condition of the cerebral vessels, whilst in the next variety, the cerebellic pain, the difficult and irregular respiration, the tottering gait and sudden temporary loss of motion, denote the inferior portion of the encephalon as the seat of undue phlogosis; and lower down, the spinal pain, with a constantly corresponding torpor and spasm of the intestines, betray an analogous condition of the spinal cord. Of the cause of this inordinate determination to the nervous centres, as we have premised, we do not propose to treat, but that it exists, we think clearly deducible from the symptoms. We deem this most important knowledge, as it indicates an important point in the system of treatment to be pursued. It explains the salutary action of revulsives and derivatives, and it indicates the benefit to be derived from local bleeding from the cerebro-spinal regions. That lesions of the stomach, liver, spleen and intestines, are often observed *post mortem* cannot be denied, and in portraying the symptoms, we have not failed to exhibit the evidences of such affections during life, but these are proven to be secondary results from two conclusive facts; first, that the symptoms of lesion are not present at the inception of the disease, nor during its course, save when the febrile reaction is decided; and secondly, that they soon disappear after the paroxysms are arrested. But we should not underrate the importance of the fact, that lesions occur because they are sequents of the general hyperæmia. They often present barriers to the success of treatment, and experience teaches us that in our efforts to cure, due attention should be given to them, and proper measures adopted for their removal.

Treatment of Mild Remittent.

Active measures will be found usually unnecessary during the chill, as the vital powers are fully competent to produce reaction. I disapprove of the method of torturing the patient with heavy bed-clothes and hot applications in this form, but consult his feelings in regard to them and allow cool drinks in moderate quantity.

In the Exacerbation.—If the pulse is hard, or full and resisting, especially if attended with intense cerebral or spinal pain, a moderate bleeding from the arm will produce great relief, but this will be very

rarely necessary. Local bleeding will be generally found sufficient, and is an invaluable adjunct. Leeches to the temples, or cups to the occipital or spinal regions, may be freely applied as the determination may indicate. If nausea and vomiting, or other symptoms of gastric irritation be present, leeches or cups to the epigastrium will be followed by great relief, and if these should be succeeded by a simple enema, under their conjoined action, the bowels will gently respond, and add greatly to the comfort of the patient. Cold drinks, ice, the effervescing draught, and lemonade, may be freely allowed. Under this treatment the patient will find great alleviation from suffering, and the intensity of the fever will be diminished. At bed time, say at 9 or 10 o'clock, it is almost our invariable rule to administer a cathartic dose of calomel and rhubarb, of 10 or 12 grs. of each. At some period before or after midnight, the fever will generally be found more or less to decline. We prefer this period for the commencement of the abortive means, because our experience teaches us that quinine, the principal remedy, is then better borne, and produces its salutary effects in a more decided and complete manner than at any other time. We now therefore usually administer from 10 to 20 grains at a single dose, in pills, or diffused in a wine-glassful of cold water. We regulate the dose by the degree of fever present. If it is intense, we administer the larger quantity; if very moderate, the lesser will answer. Under the combined action of the mercurial and quinine, free evacuation of the bowels will usually occur, but rarely excessive. Three or four hours are now suffered to elapse, during which the topical bleeding is repeated if the local symptoms do not yield. The condition of the patient will now be found generally much improved. The cerebro-spinal pain is either removed or mitigated, the pulse less frequent and more soft, the skin relaxed and moist, and the gastric irritation subdued. We therefore repeat the quinine in diminished doses of 5 or 6 grs. every 3 or 4 hours, until the period of chill has passed, generally exhibiting altogether from 25 to 40 grs. before that time. In cases attended with much gastric irritation or diarrhœa, the addition of a full dose of opium, say 1½ or 2 grs. to 10 or 12 grs. of the submuriate, at bed time, instead of the rhubarb, forms an excellent combination, which will enable the stomach to retain the quinine, afterwards administered with more certainty. Under this simple plan of treatment, remittent fever as it appears usually in this section is certainly and safely cured. We have

in this manner arrested the disease in many hundred cases, in one night. Owing however to the peculiar liability of the affection to relapse, or terminate in protracted intermittent, we usually continue treatment. We think it advisable to prescribe a mercurial alterative of calomel or mass hydrarg. for 2 or 3 successive nights, followed by 8 or 10 grs. of quinine or 25 or 30 drops of oil of turpentine in divided doses on the succeeding mornings. In cases attended with coma, delirium or convulsions during the exacerbation, topical bleeding will be freely required, and the application of cold. We have however been more gratified with the effects of the *cold douche*, in these complications, than with any other remedy. A full dose of calomel should be given as soon as practicable, followed by stimulant enemata. In mild cases, however, it will not be necessary to resort to very active treatment, as these symptoms gradually yield with the subsidence of the paroxysm. In this disease occurring in puerperal women, in addition to the general plan detailed, free local depletion over the uterine region is practised, succeeded by warm fomentations. The local symptoms disappear readily with the arrest of the paroxysms. In the form described under the title of adynamic remittent, occurring as a primary form, this mode of treatment will usually suffice, but in protracted cases, a different practice will be found necessary, as quinine is not borne well, and the antiphlogistic remedies detailed are contra-indicated. Minute doses of calomel combined with opium, will usually be found of great service, along with the employment of the oil of turpentine, which may almost be regarded as a specific in this variety. It is more suitable than quinine in this condition, as it is better tolerated, and whilst it possesses febrifuge properties very similar to the alkaloid, it also exerts a happy influence over the gastric and intestinal irritation so commonly present. It may be given in doses of 10 to 20 drops in emulsion, repeated every 3 or 4 hours until the symptoms yield.

It should be persisted in until the patient is fairly under its influence, unless the effects it occasionally produces, viz. hæmaturia, strangury, or its peculiar intoxication, supervene, when of course it should be discontinued. It would require too much space to speak of this remedy in this place, as it deserves.

Treatment of Grave Remittent.

The Cold Stage.—In this grade, external means are all important. Warm applications are to be assiduously made to the parts reduced in

temperature, together with stimulating frictions. These should be freely applied to the whole length of the spinal column and the extremities. A large blister should be placed over the epigastrium, and if the head is affected, another to the nape of the neck.—*Medicine.* To produce reaction along with these applications, I prefer enemata of quinine. The plan preferred, is to dissolve 10 grs. in a wine-glassful of weak infusion of capsicum, (made by adding 20 grs. of the latter to a pint of boiling water,) with the addition of a few drops of elixir of vitriol. This is thrown up the rectum every half hour until symptoms of reaction ensue. If diarrhœa has been or is present, I prefer enemata of quinine and laudanum, the former first dissolved in water by the addition of the acid. By these means alone, cases apparently hopeless have been rescued. In a case of very protracted cold stage, a combination of 1 gr. of calomel, 1 gr. of quinine and ¼th of a grain of opium, together with frequent doses of camphor water, induced a speedy reaction. The oil of turpentine in spinal congestion is also an excellent remedy, 10 or 15 drops alone or combined with laudanum, may be given every 1 or 2 hours, or more frequently.

The Exacerbation.—The reaction is sometimes intense. When this occurs, I have ventured on the abstraction of blood from the arm in moderate quantity with decided benefit, but this is seldom necessary. The case now only requires to be treated as the milder grade, save perhaps with a more liberal use of quinine. A moderate dose of calomel (10 or 15 grs.) alone, (or combined with 1 or 2 grs. of opium, if there is much gastric irritation or diarrhœa,) is followed in 2 or 3 hours by a full dose of quinine, (20 grs.) and repeated in doses of 5 to 10 grs. every 3 or 4 hours until 35 or 40 grains are taken. The medicine should be so regulated, that the last dose may be taken 2 or 3 hours before the expected paroxysm. I have never seen a chill or cold stage recur after 40 grs. of Farr's quinine had been retained. Although the patient may be generally considered out of danger when the paroxysms have been arrested, yet I esteem it to be good practice to prevent relapse by placing the patient on a gentle alterative course, and to repeat the quinine in diminished quantity for several days thereafter.

ART. II.—*Internal Hemorrhoids: Their Pathology and Treatment by the Application of Nitric Acid.* By J. J. THWEATT, M. D., Petersburg, Va.

In the October number of the Stethoscope for 1851 we reported a case of hemorrhoids, of fifteen years duration, successfully treated by the external use of nitric acid. It is proper to state in this article, that the cure in that case has proved perfect. We beg here to call the attention of the profession to another case, of equal interest, in which the nitric acid treatment was alike triumphant.

A very intelligent gentleman recently consulted us, who gave the following history of his case. For twelve years he had been affected with the piles; they were large and numerous, protruded to such an extent on going to stool as to render their reduction difficult and painful; bled profusely—often for an hour after an evacuation; from a hale, hearty and robust man, he had become weak, thin and emaciated; had no appetite; slept badly, and was exceedingly nervous; had tried a great many remedies; was confident, that if he were not soon relieved, he could not live long. His appearance indicated much and long suffering, his complexion was sallow, he was emaciated and completely anemic; complained of great debility and want of energy; pulse weak and irregular; nervous system deranged; was irritable and despondent; complained of pain in the lower portion of the spinal column and extremities, accompanied with a great disinclination to bodily exercise. On a careful examination we found the rectum, for two or three inches, almost filled with hemorrhoidal tumours in various stages of development: some were small and pedunculated; others were large and connected to the subjacent parts by a broad basis; some were hard and insensible; others were acutely sensitive to the touch, and bled profusely on handling; the mucous membrane covering some of the piles presented no disorganization, but in many of the tumours there was a highly congested condition of this membrane; the cellular tissue was infiltrated, and in some places indurated; the external piles were large and dependent, and occasioned great annoyance to the patient.

The question was—what must be done to relieve this case? The usual surgical operations, viz: The knife and ligature were entirely inapplicable; the patient was debilitated by long suffering, with a

greatly deranged nervous system, the tumours were large, numerous and intimately blended with the neighbouring tissues. Under these circumstances the most intrepid surgeon would have hesitated to use either the knife or ligature; on our part we regarded either of these operations as exceedingly dangerous. After mature reflection we came to the conclusion to recommend the application of nitric acid; stating at the same time, that owing to the obstinate character of his disease it would require on his part much patience, and a steady perseverance in the use of the remedy, before any amelioration of his condition could be obtained. He readily consented, and the treatment commenced.

It would be tedious and unprofitable to enter into a minute detail of the progress of the treatment; it will be sufficient for all practical purposes to state, that the strongest nitric acid was employed; that at first it was applied once a day for some weeks; as the case improved, once every other day, and towards the close of the treatment, once a week was found sufficient; the pain, during these frequent applications, was often so slight as to require no interference, at no period was it very severe, and always yielded to the application of cold water, or an anodyne injection. The hemorrhage gradually ceased, tumour after tumour disappeared, and the case terminated in a complete cure. The gentleman is now a hearty, robust man.

To a proper appreciation of the value and therapeutic action of nitric acid, it will be necessary to take a succinct view of the pathology of hemorrhoids.

Maugre the extensive researches of Jobert, Leprelletier, Brodie and Smith, there remains still doubts in the minds of intelligent surgeons and physicians, with regard to the true pathological organization of piles. The discrepancy which exists may be ascribed, in a great measure, to the period at which examinations are usually made; the morbid conditions of recent hemorrhoidal tumours are distinct and palpable from those of ancient date. An examination of a recent hemorrhoidal tumour will show, that it consists of nothing but a dilated vein, (varicose vein,) the mucous membrane covering the dilated vein being in a highly congested state. This is made more evident by pressure, which causes an entire disappearance of the tumour. After the lapse of some months the conditions of the parts are changed; the parietes of the veins become thickened by the deposition of coagulable lymph; the mucous membrane is more congested, and there is usually found an interlacement of the capillary vessels forming a complete anastomosis.

But hemorrhoids do not always present this simple organization. From the effects of time, irritation and inflammation, peculiar pathological changes take place in the parietes of the veins, the mucous membrane and surrounding cellular tissue; and also in the cavities of the dilated veins. The parietes are often discovered to be thickened, hypertrophied, or thin, soft and friable, forming isolated sacs more or less numerous. Sometimes these dilated sacs open in the surrounding cellular tissue; from constant irritation the mucous membrane adheres to the parietes of the veins; at other times it is found extremely attenuated, the cellular tissue is sometimes indurated, which state gives the aspect of a hard, solid tumour, in the interior of which is found a dilated vein. The blood sometimes escapes beneath the internal membrane of the rectum and distends that portion of the intestine. The contents of the cavities of the dilated veins undergo important modifications; from inflammation and pressure the veins are obliterated by a process denominated adhesive inflammation. In the cavities of the obliterated veins will be found a clot of blood, which in process of time is thoroughly organized; the tumours under the above circumstances are hard and unyielding.

There is another variety of hemorrhoidal tumours, to which we desire to direct especial attention; this variety is called by Dr. Houston, who first introduced to the profession nitric acid as a therapeutic agent in the management of piles, vascular tumours, erectile tumours; by others, hemorrhoidal excrescences, internal hemorrhoids. These tumours present themselves under two distinct aspects. First, as an anastomosis of the capillary vessels. Secondly, the mucous membrane is in a highly congested state, hypertrophied, and its surface presenting a red and velvety appearance, which bleeds from the slightest cause.

The above morbid states exist, according to high authorities, independent of a varicose condition of the veins. We believe this is an error. We have carefully examined many patients affected with the piles, in whom the parts presented the exact appearances, accompanied with the identical symptoms ascribed to these vascular tumours, and we have never failed to detect a varicose condition of some of the veins. We, therefore, have no hesitation in saying, that amid all the metamorphoses incident to these diseased conditions, dilated veins may always be detected. Dr. Houston, in his paper on the use of nitric acid, confirms, in a great measure, the application of the remedy to this state of the vessels and the mucous membrane. The ostensible

object of this article is to show that the nitric acid treatment has a much more extensive application.

Nitric acid is applicable to the treatment of hemorrhoids in their incipiency; it is equally applicable to the multiplied morbid transformations arising from a long duration of the tumours. The acid applied to recent hemorrhoids produces adhesive inflammation, which soon ends in an obliteration of the veins: the cure is accomplished in a short time, requiring in many cases only three or four applications.

The pain which follows is generally trifling, but if it should be severe, it is easily removed by cold application or by anointing the parts with some unctuous substance. But there are some patients, whose constitutions are very impressionable; in these, the acid not only occasions pain, but considerable perturbation of the nervous and arterial systems. A mild laxative, to be followed after the action of the laxative, by anodyne enemas, will soon remove all disturbance. There is another variety of hemorrhoidal tumours, in which the acid acts in quite a different manner; the tumours have existed for a long time, they are hard and unyielding; the vein has been obliterated and its cavity filled with coagulated blood; the cellular membrane is infiltrated with serum and lymph, frequently you find it indurated. Tumours of this kind are denominated by Dr. Gross hemorrhoidal excrescences. The knife or ligature has always been applied to piles, when they reach this stage; a persevering application of the nitric acid will supersede the necessity of resorting to either of these operations. But how does the nitric acid act in this variety? It acts in two ways; in recent cases, it produces an absorption of the contents of the pile; in those of long standing, its action is that of a caustic, gradually destroying the tissue or tissues which form the tumour. This kind of action was happily exemplified in the case we have reported. Some of the tumours were in the condition we have described; the acid destroyed them entirely; as a proof of this, the impressions which the tumours had made could be clearly seen on the surface of the mucous membrane. But we coincide entirely with Dr. Houston when he says, that it is that variety of hemorrhoids denominated vascular or erectile, in which the nitric acid is pre-eminently curative, and we will add, this variety is met with in a large majority of cases.

We have here presented an anastomosis of the vessels, a congested mucous membrane; the nervous tissue likewise enters as an element in the composition of these tumours; you have great pain; you have

hemorrhage, at times profuse; the constitution soon participates in the local mischief, and you have an array of symptoms, which warns the surgeon that something must be done, and that quickly. What is the *modus operandi* of the acid in these conditions? It acts as an anodyne, it removes the pain; it acts as an escharotic, it destroys the anastomosis of the vessels and the congested condition of the mucous membrane; it obliterates the veins, which we contend always exist. The encomiums which have been bestowed on the therapeutic action of nitric acid, under the above peculiar circumstances, by Drs. Houston and Cusack, are not exaggerated. We have frequently witnessed its beneficial effects.

In the case, the details of which we have given, there can exist no doubt of the efficacy of nitric acid in the destruction of hemorrhoids. The treatment was confined to the exclusive application of the acid. There was no auxiliary treatment. It was a fair trial; it was a successful trial. We are, however, far from advising an exclusive reliance on nitric acid in the treatment of piles. Recent cases can be speedily cured by the nitric acid, without the aid of other measures, but in those tumours of long standing, adjuvants will expedite the cure; among this class of remedies may be mentioned the balsamic preparations, confection of senna and sulphur, as recommended by Dr. Brodie, cold water injections. Cold water injections will often effect a cure, even in cases of the most rebellious character; they are remarkably soothing to irritated piles, but in order to secure their beneficial effects, they should be used early in the morning, just before an evacuation, and immediately after. Used in this mode, they are worth all the internal remedies (and their name is legion) which have ever been recommended by surgeons or quacks. We have been strongly impressed with the value of cold water injections in the case of a gentleman who had been subject to attacks of the piles for years; his general health was sensibly impaired; the pain was so great on going to stool, that the dread of it caused him to take opium to keep his bowels constipated: at each evacuation the piles descended in large clusters, of a fiery red appearance, accompanied with a good deal of hemorrhage; the reduction was difficult, and so painful at times, as to occasion syncope; he said he had exhausted the catalogue of remedies with no benefit, but an aggravation of this complaint. We recommended the nitric acid: he rejected it in the most emphatic manner, saying he could not submit to any operation. We then advised him

to inject, early in the morning, from four to six ounces of cold spring water; to retain the injection for some time by pressure on the parts; to repeat the injection just before going to stool, and to do the same immediately after an evacuation. He consented to follow the directions. We did not see him for some weeks, and when he did present himself, we were surprised at his improved appearance. He had strictly followed the directions, and with the greatest benefit; he suffered now neither from hemorrhage nor pain: the protrusion of the gut was not half so bad as formerly and the reduction of the piles was easy; his general health had improved, his appetite was good; rested well at night. We advised a continuation of the remedy. The patient has not had an attack of the piles for twelve months, and performs his usual avocations without any annoyance from his old disease.

We will now present some reflections on the comparative advantages of the nitric acid treatment. The superiority of the application of the nitric acid over the operations generally adopted for the cure of hemorrhoids, viz: excision and ligature, consists in its facility of application, freedom from dangers and pain, and in its certainty of cure. It it true that, in the variety where the veins are obliterated and the tumours hard and insensible, the application of the ligature is the more expeditious mode of curing the disease, but we are much mistaken if the large majority of patients, in private practice, would not greatly prefer the acid treatment to the ligature, even with the assurance that the former would take a longer time.

In the variety of the affection so lucidly described by Dr. Houston, the application of the acid is eminently superior to any other method which has been advised. Another advantage of the nitric acid in cases of long standing, where the constitution has been deranged by hemorrhage and long irritation, and where a sudden arrest of the disease would not only be injurious but dangerous, is, that it can be so regulated as to allow the constitution time to accommodate itself to the changes produced by the treatment. Again, in cases where the piles exist, with a diseased condition of the organs, as the lungs, head, heart and liver, this method of treatment presents peculiar advantages. Patients who are labouring under diseases of any of these organs, complain very much of the irritation and pain of the piles. The nitric acid in these cases acts as a placebo, mitigating the symptoms, without entirely arresting the disease. These advantages are not to be despised

by the practitioner. We will conclude the subject with a quotation from Dr. Copland. "There are few diseases upon which so much has been written—ignorantly, dogmatically written—as upon hemorrhoids. Owing to an imperfect knowledge of the varieties of the hemorrhoidal tumours, and of their pathological relations, fatal hemorrhage has not unfrequently resulted from excising or puncturing them. Enteritis, peritonitis, and internal phlebitis, have followed the extirpation by ligature—fatal diseases of the brain or lungs or liver have arisen from a permanent stoppage of the discharge;" and we add, that to avoid all these dangers, try the nitric acid.

ART. III.—*Remarks on some Cases of Fracture, in which the Diagnostic Signs of that Lesion were absent.* By DAVID P. SMITH, A. M., M. D., of Springfield, Massachusetts.

Having met with several cases of fracture which presented unusual difficulties in their diagnosis, and being convinced that similar cases are too often considered to be mere sprains or bruises, I take the liberty of laying them before your readers.

CASE I.—May 8th, 1854, I was called to see Mrs. J. D. G. who had stepped upon a rolling stone, and fallen on the sidewalk. She was unable to walk, and was carried home, where I saw her about one half hour after the accident. At her urgent solicitation, I gave her æther, and proceeded to examine her limb from the knee down, expecting to find a fracture. I could discover none after the most minute examination. I am confident that I made a thorough examination, for I was so persuaded by the intense pain, referred to the shaft of the tibia, that there was a fracture, that it was some time before I would give over seeking for one. I placed the leg in a copper half-boot splint, after bandaging it carefully, and left it for 2 or 3 days. I then called, and finding the leg still painful, I examined again, and plainly made out a fracture of the tibia at the junction of the middle with the lower third.

CASE II.—While talking with a medical gentleman of this place about the foregoing case, he told me that he had called my late father in consultation to a similar case, and that they were both of them unable to discover any fracture. After a few days had elapsed, the same gentleman easily found a fracture of the tibia.

CASE III.—Sometime last August, a gentleman from out of town called upon me walking with crutches. He reported that he had fallen about three feet, alighting on his heels, and that ever since, he experienced great pain in one of his limbs whenever he bore weight upon it. A physician had seen him, and told him that he could detect no fracture. I spent a long time in examining his ankle, and after at least an half an hour, I was enabled to produce crepitus and diagnose a fracture of the external malleolus.

CASE IV.—A physician from Enfield in this state, called upon me a few days since, and, in the course of our conversation, asked me if I ever found the usual diagnostic marks of fracture to fail in any case. He said he had lately had a fracture of the tibia in which he could by no means produce crepitus, within 24 hours after the accident.

One or two cases of fractures near and into joints which presented unusual difficulties in diagnosis, I forbear mentioning, because, as they are always difficult to be found out, any account of them would not further my present purpose, which is, to show that ordinary fractures in the shaft of bones may want the usual symptoms of this injury, and so greatly embarrass, not only the young, but the more advanced practitioner. I think, indeed I am sure, that many of these obscure fractures are considered to be and treated as sprains. I am particular in calling the attention of the profession to these cases, because I think that, if we would be more careful, and would not grudge an hour's careful examination of these obscure cases, we should be less troubled by "natural bonesetters" and should see fewer of those so called bruises and sprains which require months for their recovery.

It is agreed by all authorities, that all the signs of fracture are equivocal except crepitus, and even that is liable to be confounded with the grating produced by a thickening or partial absence of the synovia in some dislocations.—What then I wish to impress upon the reader is this, that he must not suppose that fractures can in all cases be detected by one, even if it is a *careful* examination. Let him, if he is not perfectly satisfied of the nature of the injury, examine again and again. Let him remember that crepitus is the only sure diagnostic mark between bruise or sprain and fracture, and that this light *often* fails us. I think it is best to treat any severe sprain as a fracture; because, if it is indeed only a sprain, the perfect rest induced by the splints will cure it quicker than any other means; well again, if it is found by further examination to be a fracture, we have employed the the means we ought from the outset. I lately had a case of fracture

of the internal condyle of the humerus in a child, which apprehensive of a fracture, I examined three or four times without finding what I expected. Being confident that there was something more than a bruise, I requested the parent of the boy to allow another examination. After one full half hour I was enabled to detect one. I have no suggestions to offer as to the proper method of examining fractures; because each individual case requires a peculiar manipulation.

I know that by the publication of these cases I have laid myself open to the charge of a want of a *tactus eruditus;* but I cannot but think that, if surgeons would examine their cases more carefully, they would treat more fractures and fewer bruises and sprains than they now do. Fergusson, in the last edition of his practical surgery, in speaking of a leg which he examined after death, says "maceration caused the fragments to separate, but during life there was no such displacement, and the annoyance did not seem greater than might have been expected from a violent sprain." The probable cause or causes of the obscurity of these fractures, I will not now stop to comment upon; it is merely *the fact* that I wish to establish.

ART. IV.—*On Gonorrhœa.* By PATRICK H. CABELL, M. D., Selma, Alabama.

It is generally admitted, I believe, that the more difficult a disease is of cure, the greater the number of remedies and specifics we have for it. This holds good of gonorrhœa especially: for every Journal brings us a new method, vaunted as better than those which have preceded it. In this paper I do not purpose to swell this long catalogue; but merely wish to lay before the profession a mode of using some of the old remedies which renders them less offensive to the patients.

Ricord holds that the beneficial effects of copaiba result from its absorption into the blood, and after-elimination by the kidneys; medicating the urine which is to pass over the inflamed mucous membrane of the urethra, and thus effecting a cure. The great draw back to the administration of copaiba, is its unpleasant taste, and its tendency to produce disorder of the stomach and bowels to such an extent that patients refuse any longer to take it. I have lately administered it in the form of water.

This does not produce any unpleasant intestinal results, as nausea, catharsis, etc. and is scarcely offensive to the taste or smell. I use the oils of copaiba, cubebs and juniper, and in chronic cases add the oil of turpentine—these are by the aid of carb. magnesia combined with water, and then thrown on a filter—the liquid resulting is perfectly limpid, has the taste and odour of the oils from which it has been made, and can be taken in large quantities without unpleasant effects. It proves diuretic, and is no doubt absorbed at once from the stomach, leaving no residuum, as is the case when these substances are administered in the usual way. I have not had much experience with this water as yet, and call attention to it in the hope of having its value tested by those living in a less virtuous community than this. I will detail a case, however, in which it proved rapidly successful.

L. a slave, contracted gonorrhœa, which continued unchecked and untreated several weeks; at the end of this time he was advised by some of his sable brethren, as a curative means, to have promiscuous intercourse with women: he followed this advice, having at the same time chordee: the result was profuse hemorrhage lasting several days. When he presented himself the blood was still flowing from the external meatus, this was checked with a solution of acetate of iron, diluted with two parts of water, used as an injection; the hemorrhage recurring again in some hours, it was repeated with perfect success in arresting the further flow of blood. He was then directed to take eight ounces a day of the balsamic water made as described above.

℞. *Ol. Copaiba*, ʒij.; *Ol. Cubebs*, ʒij; *Ol. Junip.* ʒj; *Carb. Mag. Q. S.*; *Aqua*, ʒviij. Mix well and filter. Dose—one fluid ounce repeated frequently.

The discharge rapidly lessened under this treatment, and the patient declared himself well in about a week.

ART. V.—*A Case of Empyema, following Acute Pleurisy, Successfully Treated by Paracentesis Thoracicis.* By P. C. SPENCER, M. D., Petersburg, Va.

The subject of this case was Master F. W. M. aged 14. He was seized with an attack of pleurisy of unusual intensity. It failed to yield to the ordinary remedies employed in that disease, as directed by the attending physician, and I was invited to attend in consultation. I found the patient suffering from extreme dyspnœa. It was obvious that suffocation was rapidly coming on. Upon examination I found the intercostal spaces protruding. On percussion the chest on that side was perfectly flat and when the ear was applied, respiration only in the larger bronchia could be heard. Extensive effusion in the pleural sac was the opinion of the case which we expressed, and in view of the urgent symptoms attending it an immediate operation advised. This measure was at once adopted, and a large quantity of pus drawn off. Its benefit was immediately obvious—the dyspnœa ceased, and our patient became cheerful and bright. From this moment was dated his convalescence. Little further treatment in the way of medicine was required, and after a faithful adherence to the proper regimen, our patient slowly but gradually advanced in health, which was reasonably good for years afterwards, when I lost sight of him.

LECTURES.

I. *A Review of the Surgical Clinique of La Charité during the Scholastic Year of* 1853–4.* By ALFRED A. M. VELPEAU.

GENTLEMEN:—Since the first of August 1853, 1124 patients have entered my wards, of whom 269 were discharged almost immediately. Of the remaining 579 men and 276 women, 56 died.† I hasten to

* Towards the close of each scholastic year, (the lectures at the medical school of Paris continue throughout the year, except during September and October,) the illustrious surgeon of *La Charité* is accustomed to lay before the students who throng his amphitheatre, a summary of the cases which have been presented to their observation during the past ten months, and to state the general facts which result from a consideration of them. We are happy to be enabled to publish a very accurate report of several lectures of this description, delivered by Velpeau in August last — EDITOR'S NOTE.

† This is a mortality of 1 in 15 nearly; or, excepting the deaths from cholera, 1 in 19. The mortality of the Parisian hospitals is commonly stated at 1 in 10; this is not far from the general result; but, if we consider the surgical patients separately, it is grossly exaggerated. The following statistics, taken from the report of the "Director of Public Assistance" for 1850 will give a better idea of the relative mortality:

AVERAGE MORTALITY.

Hospitals.	Med. Wards.	Surg. Wards.	Med. & Surg.
Hôtel-Dieu,	1 in 7.39	1 in 22.50	1 in 9.06
La Pitié,	1 in 11.70	1 in 27.97	1 in 13.87
Beaujon,	1 in 7.7	1 in 15.8	1 in 9.3
La Charité,	1 in 7.79	1 in 28.20	1 in 10.3
Cochin,	1 in 15.4	1 in 14.2	1 in 15.01
Necker,	1 in 8.3	1 in 23.5	1 in 10.1
Enfans Malades,	1 in 7.67	1 in 15.05	1 in 6.2
Saint-Louis,	1 in 38.3	1 in 13.4	

It will be observed that at the great general hospitals the surgical mortality is about *one in twenty-five*; the mortality in the medical wards is much greater. At the *Children's Hospital*, crowded with cachectic patients, the mortality, in both medical and surgical wards, is prodigious. At St. Louis, the medical wards are chiefly devoted to skin diseases, and the mortality is small; the surgical wards, under the care of Malgaigne and Dénonvilliers, receive many accident cases. Malgaigne's reputation always ensures him a full supply of compound fractures; consequently the surgical mortality is great at St. Louis. At the *Hôpital Cochin*, the theatre of Maisonneuve's exploits, the surgical mortality again is nearly double that of the large hospitals.—TRANSLATOR'S NOTE.

explain this very considerable mortality by stating that 12 of these patients succumbed to the epidemic of cholera.

If, now, we classify the diseases we have treated, we find:—

219 cases of inflammation;
89 cases of wounds;
83 cases of diseases of the digestive organs;
142 cases of diseases of the genito-urinary organs;
83 cases of affections of the bones and joints;
9 cases of luxations;
66 cases of fractures;
99 cases of eye-diseases;
12 cases of tumours of different species;
53 cases which were not classified.

In all of these categories, the number of male patients exceeded the number of female patients; this is explicable in two ways: of the 86 beds composing my service, 32 only are for women; and, moreover, by the nature of their avocations, men are more liable to surgical affections than women.

153 patients submitted to different operations; you are aware, moreover, that many persons were operated on for chronic engorgement of the tonsils, onyxis, encysted tumours of the eye-lids, strabismus, etc., without being admitted into the wards. These cases are excluded from our statistics.

In analysing our operations, we find:—

8 amputations of the limbs—3 of the thigh, 2 of the leg, 1 of the arm, 2 of the fore-arm;
10 disarticulations of the fingers, without mentioning numerous extractions of the phalanges;
6 fistulæ in ano;
4 operations for stricture of the rectum;
1 crural hernia;
12 evulsions of incarnated nails;
26 extirpations of mammary tumours;
7 cancroid, fibro-plastic tumours;
5 extirpations of lipomæ;
10 cancerous and adenoid tumours;
2 abdominal cysts;
2 nasal polypi;
3 uterine polypi;
1 pharyngeal polypus;
1 ablation of a tumour of the jaw;
1 extirpation of an exostosis of the great toe;
10 cataracts;
1 cancer of the eye;
6 lacrymal tumours—3 treated by excision of the puncta, and 3 by Scarpa's style;
4 operations for strabismus;
1 case of lithotomy—bilateral operation;
24 operations for hydrocele;
1 talipes—tenotomy.

Let us now resume our review, by examining in groups the different surgical affections which have come under our notice. I commence with the inflammations.

The principal seat of inflammation is the cellular tissue. We find this tissue everywhere in the economy, in the frame-work of every organ. If we examine a muscle, we see the cellular tissue surrounding its mass, separating its primary and secondary fasciculi, and, still farther, isolating its ultimate fibres. But though the cellular tissue is thus universally distributed, its qualities vary in different regions, and you comprehend at once that inflammation, from this cause alone, must be greatly modified according to the locality which it occupies. It will be diffuse when situated in loose and relaxed cellular structures, and it will have a tendency to be circumscribed when it arises where the cellular tissue is dense and impacted. Inflammation of the sub-cutaneous tissue of a limb will differ totally from that which is developed in the body of a muscle.

You will readily understand, also, that the progress of inflammations will be subjected to purely mechanical modifications, dependent on the arrangement of tissues; this is so true, that you will often observe pus, for example, to travel in a direction opposed to the laws of gravity. This leads me to speak of the differences which inflammation presents in the various regions of the body.

On the cranium, inflammations are diffuse, almost invariably. We have the anatomical explanation of this fact, when we look beneath the scalp, and find a laminated texture, covering the entire vault of the cranium, without any lines of demarcation.

On the face, it is different. Inflammations of the lips and chin, where various tissues interlace, are circumscribed, and are always accompanied by considerable swelling. On the lids, the reverse obtains; inflammation of this part is diffuse, and the nature of its cellular tissue tells us why it is so.

Passing from the head to the neck, we still perceive the influence of the arrangement of tissues. Abscesses formed above the hyoid bone do not extend to the sub-hyoidean region. In this latter region, the progress of inflammation varies according to its anatomical seat; if it is located beneath the skin, it constitutes a simple and readily recognized phlegmon; if, on the contrary, it is developed behind the aponeurosis, things are changed. The inflammation is detected with difficulty, and has a tendency to travel to a distance; for you know that the cellular tissue of this region is continuous with that of the mediastinum.

A knowledge of anatomy thus enables you to judge of the importance of diseases according to their anatomical seat; it will also permit you, in the majority of cases, to determine the starting point of diseases. In the iliac fossa, for example, the origin of an abscess will be different according as it appears before or behind the iliac fascia; in the first case, the pus may rise to the walls of the abdomen; in the second, it may extend to the thigh. The same thing in the perinæum, the situation indicates always, and with certainty, the seat of the urethral lesion. In all these cases, pus most frequently travels in opposition to the laws of gravity, and in every case its progress is regulated by the

insertion of aponeuroses, the continuity of the cellular tissue, and the direction of vascular and nervous trunks.

On the superior extremity we have phlegmons of the shoulder and axilla. The same region, and yet such a variety of inflammations! Thus, on the shoulder, inflammation presents itself in two forms; anthrax and diffuse phlegmon. Nothing easier than to explain this anatomically; beneath the skin, there is a layer of dense cellular tissue; if inflammation is developed here, it will be circumscribed, and its form will be anthracoid; but, if it penetrate the cellular tissue about the muscles, this texture being laminated and lax, we shall then have a diffuse phlegmon.

We come now to the arm-pit. Here an accurate knowledge of anatomy is especially important. The axillary space is divided into two stages by the fascia stretched across between the lower edges of the pectoralis major and latissimus dorsi muscles. You understand, at once, that inflammation in the lower stage will be less serious than inflammation in the upper and deep-seated stage. In the superficial region, you have a thin skin, and beneath it a cellular tissue which forms two layers; the first is dense, the second lamellar. In the former, inflammation assumes an anthracoid, furuncular form; there will be several distinct inflammatory spots, without any communication between them; in the latter structure, you will have a large diffuse phlegmon.

If the inflammation is towards the arm, in obedience to the laws of gravity, pus will extend to a part or whole of the limb; if it is towards the thorax, it will extend to this region, and travel along gradually, until it even reaches the hip.

Inflammations developed in the cellular tissue above the fascia, that is to say, towards the apex of the axillary pyramid, demonstrate still better the influence of anatomical arrangement. Here, following the cellular tissue of the region, they travel upwards rather than downwards. There are here, in fact, a great number of muscular interstices, which are so many avenues for the progress of inflammations. Thus, above and beneath the serratus magnus, there is a passage between the trapezius and the latissimus dorsi; there is another cellular track passing under the pectoralis major; there is another leading to the neck, which enables inflammations to extend to the summit of the chest.

You understand how this anatomical arrangement must modify the prognosis and therapeutics of phlegmons of the axillary region. The prognosis of the furuncular variety is favourable, it does well without any treatment; neither is there much gravity in inflammations of the second layer; it is very different, however, with inflammations beneath the aponeurosis; I have indicated the serious character of this affection, by showing that it may extend along the cellular tissue which accompanies the vessels to the super-clavicular fossa and even into the chest.

The treatment, too, varies according to the tissue occupied by inflammation; superficial furuncles will open of themselves, if the patients will not allow the bistoury to be used; but it is always better to open them, and remember that they do not communicate, and that you must incise each inflammatory depot by itself.

The deep subcutaneous abscess will also reach the surface without your assistance; a cure is hastened by an incision, but no great risk is incurred even if surgical interference is delayed or rejected altogether. But when the abscess is seated beneath the fascia, then, indeed, the case is altered. We must then incise, and incise early, even at the risk of making premature incisions. There is one difficulty in these deep seated abscesses of the axilla; I refer to the difficulty of detecting fluctuation in them. We are between two dangers; we may use the knife too soon and find no pus, or we may wait after pus has formed. It is best to plunge the bistoury boldly in, at the risk of not finding matter; this practice gives most excellent results, as long years of observation have taught me. When the knife is carried into a phlegmon which has not yet suppurated, its development is often arrested. There is therefore no danger as far as the disease is concerned. But a new difficulty presents itself in the numerous and important vessels which are liable to be wounded by incisions in this region. You must remember that in placing the arm at right angles with the body, the vessels arrange themselves in the axis of the arm. Turning the back of the knife towards the limb, and directing its point towards the chest, the instrument may be carried into the axillary space, and the purulent depot may be entered without interfering with the vessels.

II. *Lectures on Fever.* By WILLIAM STOKES, M. D., Regius Professor of Physic in the University of Dublin.

LECTURE VIII.*

Let us resume the consideration of the bronchial affections in typhus fever. You will commonly hear it said, that this or that patient in typhus has got bronchitis; and, if we were to be guided by physical signs alone, such a statement would seem to be correct. But I wish you to believe that the essence of this affection is not bronchitis, but rather a special condition of the air-passages, secondary to the typhus fever, the result either of the typhus deposit or of the vascularity with turgescence, of which I spoke in a former lecture. If bronchitis—that is to say, if inflammatory action supervenes—it must be considered either as re-active or specific. I am anxious to impress this upon you, because there are still many practitioners who hold that the physical signs of bronchitis are sufficient to establish the existence of inflammation. Now, I do not know any characteristic difference between the physical signs which may occur in ordinary idiopathic bronchitis and those which present themselves in typhus when the air-tubes are

* See vol. III, p. 131, 215, 222, 324, 329, 391, 479.

engaged. In both you have sonorous, sibilant, mucous, and crepitating râles; and yet the two diseases are pathologically distinct. Observe that whatever will diminish the calibre of the tubes, whether it be deposit, typhoid congestion, or true inflammation, will give râle; whatever causes secretion, whether it be true inflammation, or something the very opposite of inflammation, will give you râle. We have, as I said before, in typhus, the physical signs which are observed in true bronchitis; but beware how, in any given case of fever, you conclude from their presence that the patient has true bronchitis. In certain cases there may be re-active irritation; but never forget that the typhoid disease alone, without any inflammation whatever, is competent to produce all the signs of bronchitis. Why do I urge this so much on you? Because I wish to avail myself of every opportunity of removing from your minds the erroneous doctrines of inflammation which have been so long in vogue. We are greatly influenced by names; and though I do not suppose that there are many who would treat a case of the bronchial affection in typhus with the same reducing measures which they would employ in the idiopathic disease, yet I am sure that the idea of these signs proceeding from inflammation makes many of us who have not yet unlearned our early teachings, timid in the use of stimulants.

We find that this bronchial disease runs a course exactly analogous to that of the other secondary affections of typhus. It comes on insidiously, or, as I said before, silently; it gradually advances to its maximum, and sometimes increases to that degree that the patient dies by asphyxia. This is often the case when the disease has not been recognised at an early period. It is in almost all cases preceded by the symptoms of typhus for several days. I think in the best marked cases it first shows itself about the fourth or fifth day of the disease; but it may supervene at any period of the case. It subsides spontaneously. You will have abundant opportunities of observing the following curious circumstance in the subsidence of this disease, either when the affection runs its natural course, or when it has been necessary to treat it specially. In the true idiopathic bronchitis, when a patient is placed under treatment, we observe the disappearance of the râles to be gradual; they are less intense and less complicated day by day; and this goes on probably for a week or ten days, or it may be a fortnight, before the last shade of râle disappears. In the typhus affection, on the contrary, you will often observe that the most extensive, intense, and complicated râles disappear as if by enchantment, leaving the respiratory murmur perfectly pure. This sudden disappearance of the physical signs is only an argument among many to show their non-inflammatory origin. Nothing can be more remarkable than this; it seems analogous to the sudden disappearance of the eruption of scarlatina from the skin. You may often see this eruption lasting for three or four days, and then suddenly disappearing, leaving the skin white and pure. Consider the case of the lung in the same way, and in place of the scarlatina eruption, take the secondary bronchial disease or eruption, if you will, and you can understand the occurrence of a similar change. Mind, I do not say this happens in all cases; and I sup-

pose that for its occurrence it is necessary that there shall have been little, if any, re-active irritation. And, as I said before, we see it in cases not only where the disease has been little, if at all, interfered with by treatment, but in others in which we have used such remedies as dry cupping, counter-irritation, and various stimulant medicines. Here the practitioner is often surprised at the rapid and complete success of his treatment, and may take credit to himself for bringing about a change which was to a great degree, at all events, induced by the operation of the law of periodicity.

In the next place, we find that the best treatment in such cases is the stimulant. The mere circumstance of a patient having or presenting the most intense signs of bronchitis in typhus fever does not by any means warrant us in bleeding him, in reducing him, in exhibiting tartar emetic, or in withholding wine. Nothing of the kind; the best treatment for such cases is the free use of wine, of ammonia, turpentine, bark, and such measures.

Another argument is drawn from this interesting fact, that in a large number of cases of softened heart in typhus, we find a combination with the bronchial disease, and it is quite fair to conclude, that the conditions of the lung and heart in these cases are similar. The practical conclusion, then, to be drawn is, that the physical signs of bronchitis in a case of maculated typhus fever should not make you conclude that the patient had bronchial inflammation; and therefore you should not treat the case as such.

There is a remarkable case of fever which is not at all uncommon in this country, in which we have an alternating disease, as it were, between the abdominal and the pulmonary organs in typhus fever. This is a very bad form of fever—one of the worst. We find that to-day, we shall say, the chest is greatly loaded, that you get no good respiratory murmur; there are most intense râles, and all the symptoms of extensive disease of the lung. At this time, the belly is soft; it is not tender on pressure; and there is no diarrhœa. Things go on for two or three days, when we find the belly to be swollen, tympanitic, tender on pressure; there is diarrhœa; and on applying the stethoscope to the chest we find it comparatively free, and the râles either gone or almost altogether gone.

You turn your attention to the abdomen, and, on relieving the symptoms there to a certain degree, the chest again shows the disease; and in this way the affection alternates as it were between the two cavities, and forms a combination which is extremely difficult of management. And I think that these cases of gastro-catarrhal typhus, that is to say, of typhus with secondary disease in the two cavities, yet that disease alternately varying in its severity, are more likely to exhibit the development of tubercle after the disease has subsided, than the catarrhal typhus without abdominal complication. But, on this point, I do not wish you to believe that my mind is completely made up. My opinion is one of those that men form gradually and unknowingly, without being able to refer the sources of that opinion to any particular observation. But it does not happen in every case, that the bronchial disease

of typhus either subsides in that sudden manner we have been speaking of, or advances to such a height as to destroy the patient's life. There is another case, and a very important one, and that is—where we observe an imperfect convalescence, the chest remaining very much engaged. That is to say, after all the general symptoms of fever have subsided, the petechiæ gone, the typhus expression having disappeared, and the patient anxious for food, we find that the phenomena of the chest remain but little altered; that there is most extensive bronchial râle. In this case it appears to me, that what has happened is, that a reactive inflammation has occurred, and that a form of true bronchitis has been added to the typhus disease. Something very similar to this occurs the case of disease of the intestine in typhus. This has been indicated in by Dr. Cheyne as one of the cases of imperfect convalescence in fever. It would appear as if there was a secondary inflammation upon the typhoid alteration of the intestine, and this causes the convalescence to be imperfect. It is extremely probable that the same thing occurs in the lung. There is nothing more important, gentlemen, in the study of diseases, than to keep analogy continually before us; and you may expect that the processes of disease observed in one cavity of the body will be repeated in the others. The case above stairs to which we gave the turpentine, and the naphtha afterwards, was a good example of this.

These cases are frequently mistaken for phthisis; and it is not to be wondered at, for the patients have very much the aspect of phthisis,—they are emaciated by fever; they have often a species of semi-hectic upon them; they have cough; their respiration is difficult; and they have frequently very profuse expectoration. You will say, then, Is there any difference between the symptoms in these cases at this stage and the symptoms in cases of phthisis. I do not know any difference but this, that in the patients labouring under phthisis, there is often a very copious muco-puriform expectoration—a thing rarely seen during the pressure of the disease in typhus. It is very natural, then, that, under these circumstances, a practitioner seeing a patient for the first time might come to the conclusion that he was phthisical; and it is quite proper that all practitioners, under those circumstances, should be apprehensive of tubercle; because it is certain, that in many instances of typhus fever, a disposition to the formation of tubercle seems to have been created by the disturbance of the system in consequence of the fever.

We have three forms of tubercular disease induced in this way. The first form is what I may term acute co-existing tubercle. This is a most curious form, in which the tubercular matter is deposited, pending the early periods of the typhus fever; while the petechiæ are still on the surface, the lung becomes full of soft tubercular matter.

Let me call your attention particularly to this form of disease. We have not seen many cases of it, and but in one instance had we a *post-mortem* examination; but this was a very well-marked case. It occurred two or three years back in our wards, and was one of those cases which we do not easily forget. The patient, a man between 30 and 40

years of age, had enjoyed perfect health up to the time when he was attacked with fever; he was not subject to any form of chronic bronchitis, or pulmonary irritation of any kind; so that there is not the slightest reason to believe that any tubercular matter existed in his lungs before he was attacked with the fever. He came here at the end of the first week of his illness, with the usual symptoms of maculated typhus, and the secondary bronchial disease. So far, there was nothing unusual about the case. I observed, however, that the bronchial râles were more intense in the right than in the left lung; that there was a greater amount of large crepitus than we commonly see in the typhus disease, indicating that the minute tubes were much engorged. The chest was perfectly clear on percussion, but I took alarm at the great amount of bronchial râle which had become developed at so early a period of the case. The patient was treated by dry cupping, blistering, and the use of seneka with carbonate of ammonia; but yet we did not observe that these measures produced any sensible effect on the physical signs,—a circumstance which would have still further increased our apprehensions; but at that time we had no suspicion of what the result was to be. There was no remarkable suffering, the patient did not complain of dyspnœa, his breathing was not remarkably accelerated, and, in short, he had no symptom which would distinguish his case from ordinary typhus with severe bronchial disease. We now, however, observed, that day by day the anterior portion of the chest, especially on the right side, became more and more dull, although there was little if any change in the character of the large but crepitating râle, nor was there any indication of hepatization; the lung always continued permeable to air. The petechiæ remained remarkably stationary. About the eighth or ninth day, the patient began to sweat profusely. And this sweating appeared to occur in two paroxysms within the twenty-four hours, so that he seemed to have a combination of severe hectic and typhus fever. He died on about the twelfth or thirteenth day of his disease, the front of the right side having become very dull, but not absolutely so, and the crepitating râle remaining with singular constancy all through. On the day of his death the petechial eruption had scarcely faded.

Although we had never had any instance of the acute development of tubercle pending the typhus state, yet I ventured to make the diagnosis of the disease here, for the physical phenomena were precisely those which occur in ordinary acute inflammatory tuberculization of the lung. The right lung was found to contain a great quantity of soft, grey, tubercular matter, deposited in isolated patches, varying from the size of a pea to that of a small hazel-nut. They were not encysted; they were soft, but yet showed no appearance of suppuration. A few deposits of the same kind were found on the left side.

The great amount of this deposit is in itself sufficient to prove that it was one of the secondary affections of the typhus fever; for, although a man may live with a certain amount of chronic tubercle developed in his lung, it is quite impossible to conceive that he could have had such a quantity of soft tubercular matter, nearly filling up the whole

lung, while his health and respiratory function remained unaffected, as we have seen was the case in this man until the occurrence of the typhus fever.

I believe that this case was but the extreme case of what often occurs in typhus; and we shall just now see that there are strong grounds for holding that tubercular matter is deposited, though in smaller quantities, during the secondary bronchial disease of fever, and yet the patient recovers without having the symptoms of phthisis.

The next form we term the acute consequent tubercle, that is to say, when the patient has passed through his fever, and has had an interval of repose, everything apparently promising a perfect recovery, there is a sudden explosion of tubercular disease, with symptoms of high irritation, and with a rapid development of tubercle.

The last form, which is not by any means so frequent as the others, is the chronic consequent tubercle, in which, when a patient who has had catarrhal disease in the early periods of his fever has recovered, although with an imperfect convalescence, the disease gradually passes into the ordinary pulmonary phthisis, and is followed by the same result.

I spoke to-day in the wards of a practical question as to your diagnosis when called to a patient who has gone through typhus fever, and in which the chest is very much engaged; this is a case that you will be often called to in consultation. The patient has been under the care of another person; he has gone through severe typhus fever; he is in the 25th, or the 30th, or the 36th day of his illness, and appearances of his being consumptive occur. It is very likely that the patient may be of a consumptive family, and an alarm is excited. He has wasted in flesh; he has quick pulse; he may have had some sweats; he has cough and muco-puriform expectoration. Well, such is his position. You are called on then to say, in the common phrase, whether his lungs are affected or not. You examine his chest carefully; and, if you find the following circumstances to exist, you may in most instances be able to assure the patient's friends that, as yet, the lungs are not tubercular; if you find that the physical signs of bronchitis are universal, that in no part of the chest where you examine, you fail in discovering sonorous râles, mucous râles, muco-crepitating râles, in various degrees of combination—in other words, stethoscopic indications that every portion of the bronchial tree is affected,—if, then, with this universality and intensity of bronchial signs, you find that the patient's respiration is not much excited, that he is not complaining either of dyspnœa, or that his respiration is rapid, you may be almost certain that the patient is only labouring under the remains of the typhoid bronchial disease, and that he has not yet passed into a tubercular condition. You make the diagnosis here, gentlemen, from a source which you will find of great importance; *it is a diagnosis from the want of accordance of phenomena.* What do we find here? Universal bronchitis—universal signs of bronchitis. Now, we know, that in 99 cases out of 100, of the development of the tubercle after fever, where there is universality of deposit there is extreme suffering—there is great dyspnœa—there is

extraordinary acceleration of breathing, so that in the case above specified the want of accordance between the extent of disease and the amount of suffering, leads you to a negative diagnosis, and enables you to declare, that as yet, the patient is not tubercular. If, on the other hand, this patient had, with the physical signs which I have described, any hurried breathing, difficult breathing, and the signs and symptoms of great irritation of the lung, it would be quite impossible to say that he had not consumption. In a very large number of cases you will find that this rule will apply. In cases of bronchial disease following, not only typhus fever, but a variety of other affections, you can apply this diagnosis very commonly indeed; in the remittent fever of children you can apply it; in cases of the bronchial disease which follows measles, in cases of the bronchial disease which follows scarlatina, and in a variety of other affections, the diagnosis from the want of accordance of the phenomena is applicable. It is very important, indeed, to study carefully those means of diagnosis which are available in cases where you have not an opportunity of repeated observation. In most cases of consultation, the consulting physician only sees the patient once. If you should be able to see the patient three, five, or six times, at intervals of two or three days, you would not be under this difficulty: but by this weapon of diagnosis, if I may make use of such a phrase, you are able, even by seeing the patient once—which is the position you will often be in—to give a satisfactory diagnosis.

I have drawn your attention to the great probability that exists, that in many cases of this typhus fever, with the secondary bronchial disease, there is developed not merely the ordinary secondary bronchial disease, but more or less of actual tubercular matter; and yet it does not follow that the patient shall ever have the symptoms of phthisis. He may recover, and often does recover completely, with a perfectly pure respiratory murmur, without any cough, or without any symptoms whatever of disease; but after a period varying from three months to nine months, he expectorates a few calculi. There cannot be any doubt, when all the circumstances of the case are considered, that those calculi were petrifactions of a certain limited number of tubercular depositions which were formed pending the fever, and which from their being isolated, from their being very small, from their never forming any consolidation about them, from their having no cavities, altogether escaped observation. The number of cases of individuals who, after having gone through this bronchial typhus, at some subsequent period are observed to expectorate small calculi, is quite sufficient to warrant this conclusion.

III. *Lectures on General Physiology.* By Claude Bernard.

Lecture III.

*On Irritability and Excitability.**

We have shown, gentlemen, that there exists in every living being an incessant movement of composition and decomposition, of growth and decay. The movement of decomposition consists in the displacement of molecules which return into the common medium; the movement of composition, on the contrary, consists in the displacement of molecules which leave this medium to join themselves to groups of living molecules. This double movement constitutes *nutrition*, the fundamental property of all organized beings.

We have noted, too, the physico-chemical properties of organized beings, and their vital properties, excitability and irritability. Excitability is the property appertaining to every living substance of reacting under the influence of external agents. It is a property which does not imply the existence of any special tissue; it resides in various tissues, and is possessed by vegetables as well as animals; it does not involve spontaneity. It is different with *irritability* and *sensibility*. These properties do not belong to all living beings; animals alone are endowed with them. Irritability and sensibility cannot be accomplished in any and every tissue; they are produced according to a constant law, and in certain special tissues.

These properties have been accurately defined only since the days of Haller. They were defined, thanks to the study of the living animal; thanks to Haller, who devoted himself to the observation of life, the sole condition of progress for the physiologist. Haller was the first who studied irritability and sensibility, and distinguished one from the other. By this single discovery he determined the vital characteristics of the principal tissues of the economy. This was in 1746, an epoch at which false ideas in physiology were rife; Haller refuted these erroneous notions, and his decisive experiments the cotemporaneous theories which were based on incorrect observations. Haller defined irritability as "the property possessed by a living fibre of contracting if it is excited." Therefore every tissue which contracted under the stimulus produced by physical or chemical agents, were regarded as being formed essentially of the irritable fibre. All of the tissues were examined with reference to this, and in one only, the muscular tissue, was this property manifested. It was established, in consequence, that irritability was localized in the muscular fibre.

Sensibility, a property distinct from irritability, was studied in like manner. Haller defined it thus: "The sensible fibre is that fibre of living beings which, when touched by an external exciting agent, produces a painful sensation, which the animal manifests by the ordinary

* See Vol. III. p. 397 and p. 494.

signs of pain. Among all the animal textures, the nervous fibre was alone found to be sensitive, and it was accordingly demonstrated that sensibility should be localized in the nervous system.

Since the time of Haller, that is within a century, new researches have been added to these fundamental experiments; the system of Haller has been developed and completed, but not changed, for it was founded on fact. We say now, as he said, of the muscular system, that it is composed of that tissue which possesses the property of contracting under the influence of certain agents, but we distinguish two orders of muscles; those of animal life, dependent on the will, and those of organic life, which preside over motor acts uninfluenced by the will; we admit, at the same time, that both of these systems of muscles equally possess the property of contractility. Hence, wherever we find an irritable organ, we may infer that it contains muscular fibre.

Haller located sensibility in the nervous system, and he thought that there was but one species of nerves, and that they all possessed sensibility. He did not know the whole truth. Modern researches have shown that the power of awakening sensations of pain reside only in one portion of the nervous system, and that four species of nerves must be admitted, viz:

1. The nerves of common sensation, which possess the power of exciting pain, as Haller remarked.

2. The motor nerves, which Haller nearly distinguished when he said, in treating of muscular irritability: "It is astonishing that nerves have the property, not of contracting themselves, but of inducing muscular contraction."

3. The nerves of special senses;

4. The chemical, trophic nerves, which preside over the chemical phenomena of life, the secretions, etc.

Thus the labours of Haller have been completed by modern research.

I suppose, gentlemen, that you are somewhat acquainted with anatomy,* and I will therefore simply recall to your minds that the nervous system originates in a central portion composed of the cerebrum, cerebellum, and spinal cord. The motor nerves arise, in all vertebrate animals, from the anterior columns of the cord, or from their prolongation in the cerebrum. These nerves have no sensibility; they are distributed to muscles, and when they are irritated, motion is produced in the muscles with which they are connected.

All the sensitive nerves arise from the posterior column of the cord, or from the prolongation of its fasciculi in the cranium; these nerves have ganglia formed on their roots; they are all excessively sensitive, and if they are touched the animal evinces signs of acute pain.

Other nerves arise exclusively from the cerebrum; they are such as preside over special senses; for example, the acoustic, the optic, the olfactory nerves; they exist only in animals high in the scale of life; they are not sensitive, in one sense, for they do not excite pain when

* The lectures at the College of France are delivered before a mixed audience.—Editor.

they are irritated; but they respond by special sensations when solicited by external agents; thus, if the optic nerve is excited, the animal closes its eye, and its pupil contracts, as if it were dazzled by a bright light. This same sensation has been described by patients on whom the optic nerve has been divided in the course of some operation on the eye. Every nerve, when it is solicited, reacts according to its function.

The trophic nerves, or, as they are otherwise termed, the nerves of organic life or of the great sympathetic, distributed to the splanchnic organs, where they accompany the arterial branches, have their origin in nervous ganglia; they are not sensitive; they preside over the chemical phenomena of life.

Thus, modern physiologists recognize four species of nerves and two species of muscles.

Irritability, which resides in the muscular tissue, and sensibility, which exists only through the nervous system, are the two most important properties of living beings; they are intimately united, and cannot be isolated as regards function. It is only by artificial analysis that we succeed in dividing them. Now, as we are studying at this moment not functions, but the elementary phenomena of life, we ought to determine whether they are really two distict properties, as Haller affirmed, or whether they are not one and the same property, manifested under different forms. Both of these opinions have been sustained. As it is impossible to detect the property of irritability apart from the property of sensibility, we have a right to conclude, it was asserted, that the irritability of the muscle is nothing more than the result of the sensibility of the nerve; do we not see that as soon as the nerve is cut, the muscle ceases to act? The objection was specious. Haller, who was convinced that these properties were entirely distinct, replied to this objection that "the heart, the most irritable of organs, is nevertheless the one which is least supplied with nerves." In fact, the contractile power of a muscle bears no relation to its nervous supply. But this reasoning was insufficient; a demonstration was requisite, and consequently the objection was not destroyed, but survived Haller's arguments. It has since been demonstrated, that if a nerve of motion is cut, it loses its properties after a few days, while its corresponding muscle preserves its contractile power for an indefinite period, when it is excited by certain stimuli. This demonstration is admirable, but its execution presents some difficulties. We are now able to demonstrate the distinctness of these two properties very satisfactorily. Substances have been discovered which exercise an elective action on certain tissues of the economy. When one of these substances is introduced into the circulation, there results a profound modification of the properties of some one tissue; the animal loses a single one of its properties and retains all others, and, in this way, we can obtain the isolation of two properties, which, in the normal state, are always observed together; in a word, we can prove that irritability and sensibility are two independent properties.

Lecture IV.

Gentlemen: I shall demonstrate to-day that the properties of nerves and muscles are essentially distinct, by showing you that the essential property of one of these systems can be destroyed, while that of the other is preserved intact or even exalted.

I design to separate artificially these two properties, which are usually combined for the exercise of the functions, and for this purpose I make use of the curare poison, which expends its energy on the nervous system, without affecting the muscles. It is true that the muscles lose their spontaneity,* because their nervous connections are destroyed, but they do not lose their contractility, as we can demonstrate by submitting them to the influence of certain agents. We take a frog and introduce a portion of the poison in question beneath its skin, and the frog dies; we do not introduce the poison into its stomach, because it is not absorbed there, we place it in a wound, and it is partly dissolved; it enters the vessels, circulates with the blood, comes in contact with all the organic elements of the body, of which the nervous tissue alone is affected by it.

Here the professor performed the experiment described. He made an incision on the back of a frog, and placed a fragment of curare in the wound; the effect of the poison, which is instantaneous in higher animals, was not manifested for several minutes.

The rapidity of action of this poison, bears a direct relation to the activity of the phenomena of nutrition in the animals in whom its deleterious effects are manifested; it requires five or six minutes to destroy a frog, but it kills a bird in thirty seconds.

We shall now find that the nervous system of the animal on which we have experimented is alone stricken by death, and that the muscular system continues to live.

The frog manifesting no signs of life, its inferior extremities were removed from the trunk, and suspended by a thread tied about the two sciatic nerves. Both nerves were touched with the electric wires, but no muscular movement took place, whereas when the wires were applied to the muscles themselves, violent convulsive movements were immediately produced; this experiment was repeated several times with precisely the same results.

You see, gentlemen, that every trace of the property of the nerves has been destroyed by this poison, while the muscular property of contractility has remained unaltered. These effects will last in the frog for twenty-four hours.

This experiment conclusively establishes, then, that the nervous and muscular properties should be regarded as essentially distinct.

Let us now study these phenomena in themselves; let us seek their intimate nature. Are they produced by currents, by fluids, by pecu-

* See Vol. III. p. 498.

liar forces? To aid us in this enquiry, we need all the resources which we can command, and, in the first place, we must appeal to anatomy, which will teach us the matter and arrangement of the elements which constitute the two tissues with which we are concerned.

I may state succinctly that the nerves represent a system of fine tubes, and that each tube presents three distinct portions: 1. A somewhat thick, transparent envelope, without any determinate structure, which, by transmitted light, has the appearance of a double contour. [Neurilemma. According to some anatomists, the double outline is occasioned by changes occurring after death.—*Trans.*] 2. The interior of this envelope is occupied by the medulla of the nerve, composed, as we are taught by chemical analyses, chiefly of fat and albumen; this structure is amorphous and transparent. [White substance of Schwann.] 3. In the centre is a filiform tube, called the axis or cylinder. [Primitive band, *Remak;* axis-cylinder, *Purkinge.*] This structure is the same in all the nerves, whatever their special destination. It is not possible to differentiate them anatomically; this is the task of physiology.

Besides these nervous tubes, there are certain corpuscles or central organs towards which several nerves converge; just as these nerves penetrate the corpuscle, the envelope ceases, and the nerve is reduced to its central axis or cylinder. Every nervous fibre originates in one of these corpuscles, either in the spinal marrow, the brain, or in the intervertebral ganglia or those of the great sympathetic; the corpuscles of the ganglia differ from those of the central nervous system only in being covered by the envelopes of the nerves diverging from them, this structure not being interrupted at their junction.

How do the nerves terminate in the different tissues? The motor nerves, on reaching the muscles, seem to end suddenly, dividing dichotomously; it was thought that they terminated in loops; but it is now admitted that they terminate by free ends in envelopes of the muscular fibre. [According to Hagner the free extremities enter the sarcolemma of each fibril.] They lose their proper envelope before their termination, and are continued only by their centre or axis. At the skin the terminal nerves usually form loops which constitute the *corpuscula tactûs.*

I will not dwell on these anatomical details, for I desire simply to give you a general idea of the structure of the nerves; let us pass immediately to a consideration of the muscles.

CHRONICLE OF MEDICAL SCIENCE.

PHYSIOLOGY.

1. *The Physiology of Menstruation and Conception.* By Professor Bischoff.

The attention and laborious investigation of the student has been long directed towards that most interesting and important point, the physiology of menstruation and conception, and amongst the many who have labored in this field, we know of none more distinguished than Professor Bischoff. We design to give our readers an abridged sketch of his recent labors, and the results to which he has arrived.

M. Bischoff gives in detail his examination of the organs of generation in thirteen women, who had died suddenly whilst menstruating; the death, in most of the instances, being the result of accident or violence. These examinations were made with the greatest accuracy; and, when taken in connection with the previous history of each case, will aid very much in determining the physiological facts involved. Our space forbids us from presenting the minute details of each dissection, and we will therefore only give the deductions derived from them.

Professor Bischoff remarks that these cases confirm the doctrine, that in woman at every menstruation a follicle ripens, swells, and bursts, that the ovum escapes, and that a corpus luteum is formed. The eleventh case seems to prove that the full consequences of menstruation are not in every instance necessarily carried out, but that a follicle may swell, and the ovum ripen without the bursting of the follicle, or the escape of the ovum. Such a condition will cause sterility, notwithstanding menstruation. Perhaps, also, the pain of the menstrual period depends upon this incomplete development.

A woman may not menstruate, and yet she may conceive; for the essential condition, the ripening and escape of an ovum, may proceed, and only the usual outward symptoms of this event, the secretion of blood, fail. Professor Bischoff remarks, that he could never succeed in finding the ovum, but observes that he does not believe that it is so soon destroyed. He says there are but two cases known to him where it was so found, and that only one of these presents the desired certainty. This is the following observation of Professor Hyrtl, of Vienna:—Thérèse Michal, aged 17, died on the 10th of October 1844, of

peritonitis, in the clinique of Prof. Oppolzer. She had only menstruated twice in her life, and the last time was two days before her admission into the hospital on the 8th October. The breasts were tolerably developed; the pubes slightly covered with hair. The hymen was uninjured; the uterus of moderate size, compact, its cavity filled with a considerable quantity of thick blood; the mucous membrane was so loosened as to resemble a half-liquid plastic exudation. The lining membrane of both Fallopian tubes was suffused, loose, and covered with mucus. Both ovaries were of fair size, but the left one showed a ruptured follicle of the size of a large hazel-nut, filled with semi-fluid blood. Prof. Hyrtl submitted the parts to careful inspection under the microscope on the same day. Neither in the vagina, uterus, or tubes, could he find a trace of spermatozoa. But by a careful examination of the left tube, in that part which traverses the substance of the uterus, he found an ovulum, with all its characteristic properties, somewhat dull and turbid indeed, but fully recognisable. Hyrtl believes he even detected the germinal vesicle. This is a remarkable anomaly, since the germinal vesicle of every ovum, when it has left the ovary, has disappeared. Prof. Hyrtl had the ovulum immediately drawn by his artist, and exhibited it on the same day in his lecture on physiology. This case is free from doubt, as there is no room to suspect coitus. Prof. Bischoff regrets that he cannot admit as much with reference to the cases of Dr. Letheby, published in the "Philosophical Transactions" for 1852, but his reasons of dissent do not appear to be very valid.

Prof. Bischoff takes occasion to discuss the question as to the differences between the corpus luteum of simple menstruation and that of conception. In the cow and sow the corpora lutea of the non-pregnant are altogether similar to those of the pregnant, and he has made the same observation in the bitch, the cat, and the porpoise. They disappear more quickly when no conception follows. In the human female, at the earliest period of the bursting of the follicle, the filling of it with blood, and the beginning of the development of the membrane of the follicle, to the formation of the corpus luteum, there is no difference at all. But in the further development of the corpus luteum, the impregnation of the ovum and gestation bring about a material difference. The corpus luteum in simple menstruation never attains the full stage of formation up to the complete filling up of the follicle and the metamorphosis of the blood coagulum; but this substance only developes itself into a peripheral layer, and soon falls into retrogressive metamorphosis. It shrivels up, and only leaves at the next and the succeeding menstruation a more and more indistinct spot, changing from yellow to brown and black, and soon there remains nothing but a scar; which lasts for a time, and gives evidence of the past process which has at an earlier period taken place on the surface of the ovary. The corpus lutea of conception, on the other hand, goes on developing itself throughout the first months of pregnancy, and attains a fullness of size, colour, and texture, which the menstrual corpora lutea never reach. It lasts throughout the whole period of pregnancy, and disappears after

delivery. It may, however, be questioned whether it has a great diagnostic value. In the first period, so long as there are no other signs of pregnancy, these differences either do not exist, or are very difficult to determine. After delivery, when the signs of pregnancy in the uterus have disappeared, it again becomes difficult to distinguish them from the corpora lutea of fourteen days or three weeks' standing, resulting from menstruation. And where pregnancy is plain, from the state of the uterus and other parts, the corpus luteum is of no value. Prof. Bischoff, therefore, concludes that the corpus luteum cannot be used in the determination *of doubtful cases.*

Professor Bischoff holds it to be proved that conception and pregnancy depend absolutely upon menstruation as the period of the ripening and expulsion of an ovum. He remarks, however, that it can scarcely be doubted that the time occupied by the transit of the ovum from the ovary, the arrest of the ovum, and the preparatory changes in the uterine mucous membrane, suffer great differences in individuals, and hence entail a longer or shorter duration of gestation.—*Henle's Zeitschrift, and Monthly Jour. Med. Science.*

2. *The Entrance of the Spermatozoon into the Ovum.* By M. KEBER.

By the diligence of embryologists, the science of development continues to make wonderful advances. Martin Barry and Nelson had already published observations of the entrance of the spermatozoon into the ovulum; but their observations were not regarded as completely satisfactory, till Keber, following in their footsteps, by a careful observation of the process as it takes place in the fresh water mussel, made out and described the different stages of this wonderful function. Since Keber's work appeared, M. Bischoff has been twice in the press; first of all, with a pamphlet controverting the views of Keber, and then with one fully confirming the same views. Bischoff also takes occasion to make some amends to Martin Barry, whose uncommon accuracy and profound research he has occasionally failed to recognize, till forced by overpowering evidence.

In the fresh water mussel (*unio*), at the time of conception, the ovulum, although still small, projects at one part a minute process which springs from the membrane of the albumen, and perforates the cortical membrane. This process dehisces, lets escape a little albumen, and admits one of the spermatozoa which surround it. This done, the micropyle, as it is called, again closes by constriction or obliteration.

Afterwards (and sometimes earlier) there is formed near the micropyle an adhesion between the membranes of the albumen and of the yelk, then the yelk-bag dehisces, receives the spermatozoon into its interior and again is closed.

The spermatozoon afterwards sinks deep into the yelk, swells and becomes rounded; after some time a nucleus appears in it, while its outer membrane thins, and at length disappears.

The nucleus of the spermatozoon splits up into several irregular divisions which at first lie near one another, and then become diffused through the yelk, so that before the dissolution of the germinal vesicle the yelk is filled with particles derived from the male.

M. Keber has also confirmed the observations of Barry in regard to the small pellucid vesicles not rarely found in the abdominal cavity of the rabbit, attached to the ovary, the fimbriæ, the oviduct, the peritonæum, or the uterus itself; within which are observed vibratory motions over the whole surface and rotatory movements of various corpuscles, and of a large mulberry-like body on its axis, which increases under the eye of the observer by the apposition to it of roundish corpuscles, from the fluid of the vesicle.

Barry observed a similar vesicle imbedded in the mucous membrane of the uterus. Those found in this situation, are smaller than those of the abdominal cavity. In these bodies Keber has observed changes resembling the formation of the micropyle in the ovulum, and for that and other reasons regards these vesicles as ova. But for farther discussion of this subject we refer the reader to Keber's monograph.—*Edinburgh Med. and Surg. Journal.*

3. *Analysis of the Excrements.* By WILLIAM MARCET, M. D.

The author describes a new method of extracting the immediate chemical constituents of the excrements of man and animals, and gives an account of the substances obtained by its employment. Healthy human fœces are boiled to exhaustion in alcohol. The residue is insoluble in œther, and yields to boiling water nothing but ammoniaco-magnesian phosphate. The strained alcoholic solution deposits, on standing, a sediment, from which it is decanted, and then mixed with milk of lime. The subsiding lime is of a yellow brown colour; it is dried on filtering paper, and treated with œther, cold or hot; and the solution thus obtained, yields, on spontaneous evaporation, beautiful silky crystals, which are purified by solution in a mixture of alcohol and œther, repeated filtration through animal charcoal, and recrystallization; they then appear in circular groups, have the form of acicular four-sided prisms, and polarise light very readily. This crystalline body the author proposes to call Excretine, the properties and various compounds of which he minutely describes. From this investigation it appears that healthy human excrements contain:—

1. A new organic substance, possessing an alkaline re-action, which the author names Excretine.
2. A fatty acid, having the properties of margaric acid, but not constantly present.
3. A colouring matter, similar to that of blood and urine.
4. A light, granular substance, whose properties have not yet been sufficiently examined to admit of its being considered a pure substance.
5. An acid olive-coloured substance of a fatty nature, named Excretoic acid.
6. No butyric acid and no lactic acid.

The fœces of various animals were submitted to the same process of analysis, with the following results:—

1. The excrements of carnivorous mammalia—viz., the tiger, leopard, and dog (fed on meat), contain a substance allied it its nature to excretine, but not identical with it. They contain no excretine; they yield butyric acid, which is not present in human excrements.

2. The excrements of the crocodile contain cholesterine and no uric acid; while those of the boa yield uric acid and no cholesterine.

3. The fœces of herbivorous animals—viz., the horse, sheep, dog (fed on bread), wild boar, elephant, deer, and monkey, contain no excretine, no butyric acid, and no cholesterine.—*Proceedings of R. Society and Med. Times and Gaz.*

4. *The Relation of the Colourless to the Coloured Blood Corpuscles.* By M. Donders.

The relation of the white to the red corpuscles, estimated heretofore as 1 : 8, or 1 : 10, is, according to more recent observations of Donders and Moleschott, much below this; they estimate it at 1 : 373; their results are based on the examination of blood from seven individuals at different periods of life. They found the proportion to be, in the ages between 2½ and 12 years, 1 : 226; 30 to 50 years, 1 : 346; old men, 60, to 80, 1 : 381. In females, after menstruation, the numbers were as 1 : 247; females not menstruated, 1 : 485; in pregnant women, 1 : 281. The colourless corpuscles increase after food, and are diminished by fasting. Food rich in albumen increases the quantity of colourless cells.—*Schmidt's Jahrbucher and Brit. and For. Med. Chir. Review.*

PATHOLOGICAL ANATOMY AND MICROLOGY.

1. *On Cavernous Blood-tumours.* By Carl Rokitansky.

Rokitansky† continues his researches on these tumours, the chief seat of which is in the liver, then in the subcutaneous connective tissue, and the cutis, on the face in the substance of the lips, on the trunk, and the limbs. Rokitansky has also seen cases of cavernous tumours in the bones of the cranium, on the dura mater and pia mater. He has seen two cases in which these tumours on the temples admitted of extirpation. The tumours are always in connection with several smaller or larger veins, so that they are either seated on them, or the veins are involved in the mass of the tumour. He has seen one on a branch of the saphena, near groin; also on the superior longitudinal

† Zeitschrift der Gesell. der Aertste zu Wien, p. 256, 1854.

sinus. Those in the liver are generally seated on the branches of the vena porta. In the extremities, as remarked by Schuh, they are placed on the fasiæ, sinews, or periosteum. There is generally but one tumour in each individual case; but several instances of multiple tumours have been observed.

Rokitansky regards the cavernous tumour as a new formation; the communication with the veins he supposes to take place subsequent to the first origin of the tumour, and in the following manner. The meshwork bores its way through the veins, the inner surface of which, when in connexion with the cavernous structure, will usually be found rough and villous, and covered with a feltlike mass, which, on further examination, may be shown to be the tissue of the cavernous growth, which has made its way into the vessel. The anastomosis of the cavernous spaces, with one or several veins, and then being filled with blood, must be regarded as a secondary occurrence, which has been clearly established by the observations made on small tumours which contained no blood, not having as yet opened into the sources of their blood contents.—*Med. Times & Gazette.*

2. *On Cavernous Tumour of the Brain.* By M. LUSCHKA.

Luschka ‡ has met with an instance of cavernous tumour seated in the anterior lobe of the left hemisphere of the brain in a case of suicide, which presented no other abnormal conditions. His views with regard to the pathology of the disease, its structure and mode of formation, are almost identical with those of Rokitansky. The tumour, of the size and form of a pigeon's egg, was removed with great facility from its seat, and had no apparent vascular connections. The contents of most of the cavernous spaces was blood, which presented corpuscles of natural form and size; some of the cavities contained crystals of cholesterine, fat-granule cells or corpuscles, and fine molecular calcareous granules. Luschka likewise remarks the similarity of the cavernous tissue to cancer stroma, as noticed by Rokitansky. The bands of the fibrous meshwork present various appearances, some fine and delicate, others strong; the fibres are of different diameters, from that of the finest connective-tissue fibrillæ 0·006^{mm} in breadth. In the thicker bands, round or oblong nuclei were visible, many of them appeared hollow and tubular, the central cavity being separated by a sharp line from the fibrous wall. It was several times noted that the cavity of the hollow bands communicated with that of some of the little club-like masses which were attached by a pedicle to parts of the meshwork. These little pyriform bodies were scarcely 0·1^{mm} in length; they were attached by a longer or shorter stem or pedicle to the fibrous tissue, and played by their free extremities in the cavities of the tumour. Many of these bodies were hollow, and, as before remarked, communicated frequently with the tube-like bands. Rokitansky has also described this system of tubelike bands with structureless walls, with simple and sometimes double contour, and containing granules, nuclei, and cells.—*Med. Chir. Review.*

‡ Virchow's Archiv. Band vi. Heft iv. p. 458, 1854.

3. *On Vascular Tumour.* By CARL ROKITANSKY.

Rokitansky † has met with two instances of a peculiar form of tumour, one from the eyelid of a child half a year old, the other from the integument of the forearm. They are remarkable for a gland-like lobular structure, with an interlobular connective-tissue. On microscopic examination, in whatever direction a section was made, a trabecular structure was presented, and the growths seemed formed of an aggregate of blood-conducting tubes, which ran in a determinate direction, lying parallel to each other. On cross section, the circular mouths of these vessels were shown varying in diameter from $30 \cdot 1000^{mm}$ to $75 \cdot 1000^{mm}$. On first view, the appearances on section showed the greatest similarity to a section of the cortical substance of the kidney. He considers the tumours to be an example of new formation of vessels. The tubes present hyaline structureless outer and inner walls, which appear independent of each other; and between them are found oblong nuclei and caudate cells. The tubes give off branches, and sometimes end in cœcal branches. The mode of development of these vessels is not yet sufficiently determined; but Rokitansky believes it to be connected with the new formation of blood. He believes the tumours under consideration to be identical with those described by Schuh, as alveolar blood or vascular spongy tumour. They are not to be confounded with telcangiektasis, with which they have nothing in common; they are rather to be designated as a fasciculated vascular new formation.—*Id.*

4. *New Formation of Blood-vessels.* By Dr. JOS. MAYER.*

The author has investigated the formation of blood-vessels in plastic exudations in the serous membranes, and in wounds of the skin. The small red points and striæ in fibrinous exudations, considered by Hunter as the first stage of the formation of new bloodvessels, he believes, in the majority of cases, to be nothing more than blood-corpuscles which have escaped with the exudation, and which are destined to undergo the usual metamorphosis of extravasated blood. He combats Vogel's views that the new formation of capillaries in exudation originates in branched cells which contain blood, and subsequently unite to form a network. It would appear, however, that the points and striæ in other cases, especially in older exudations, actually present small vascular networks. From the results of observations and experiments, he concludes that the new vessels which appear in an exudation are to be regarded as direct prolongations of those of the tissues on one or both sides of the exudation. The vascular networks in false membranes and wounds are, in fact, prolongations of the capillary vessels already existing before the inflammation; the prolongations are formed at first as fine solid threads, which gradually become thicker, and hollowed so as to admit the passage of bloodvessels; here and there they

* Zeitschrift der Gesell. der Aertze zu Wein, p. 267, 1854.

† Schmidt's Jahrbucher, No. 3, p. 281; No. iv. p. 13, 1854.

present spindle-shaped, or triangular enlargements, in which a secondary nucleus, generally single, is produced. In the neighborhood of the new vessels, as well in false membranes as in the granulations of cutaneous wounds, spindle-shaped and stellate cells occasionally appear, which are generally transformed into elastic fibres. The vessels first formed are but simple capillary tubes, but by subsequent addition of nuclei and fibre cells become converted into vessels of a higher order—arteries and veins. The time within which vessels are formed is variable: in his experiments, Mayer has observed them on the fifth day, but usually on the ninth.

5. *Hypertrophy of the Lymphatic Glands.* By M. VERNEUIL.

Verneuil † has determined the histological conditions of the lymphatic glands in some cases of simple hypertrophy. The glands (cervical) were regular in form, round, easily cut, presenting a granular surface when torn, and homogeneous throughout, without any traces of septa or lymphatics. Under the microscope, the natural glandular elements were found, only in much increased quantity. By scraping or pressure a reddish-white turbid juice was obtained, miscible with water, which contained numerous transparent, for the most part regular, round, nucleated lymph-corpuscles; here and there granular cells, three or four times as large as the corpuscles, and with a more or less clear nucleus. Fragments of the glandular substance examined with a low power, exhibited granulations similar to the so-called acini; these granulations, when isolated, showed, with higher power a vesicular, generally transparent envelope, the contents of which were the corpuscles above described.—*Med. Chir. Review.*

6. *Alterations in Gouty Joints.* By SCHROEDER VAN DER KOLK.

Schrœder van der Kolk, in a memoir in the *Nederlandsch Lancet*, July and August, 1853, describes the changes in the finger-joint of a hand strongly affected with chalk-stones. He first observes (what has been long known) that the deposit (of urate of lime?) is ultimately not confined to the tendinous and ligamentous structures, but affects the skin and subcutaneous textures. He likewise shows that in the joints most strongly affected the nerves become imbedded in and infiltrated with the mineral matter, and that the coats of the veins are to a great extent likewise invested with it. Finally, it gains the interior of the veins, and there is reason to believe that their valves are rendered incompetent by the deposit, as Schroeder van der Kolk found no difficulty in injecting the veins of the finger from those of the hand in the most severely affected parts. The arteries were unaffected. From these observations, the author concludes that the gouty deposit is taken up by the veins, and thus at least in part transmitted to the general circulation. The severe pain of gout he explains by the changes in the nerves.—(*Canstatt's Jahresbericht*, for 1853, vol. ii. p. 47.)

† Schmidt's Jahrbucher, No. vi. p. 291, 1854.

7. *Atrophic Degeneration of Muscles.* By MM. DUCHENNE and MANDL.

Recent microscopic observations by MM. Duchenne and Mandl, as well as by M. Lebert, have thrown some light on this subject (Memoir in *L' Union Medicale* 1852). These observers show that the atrophy of the muscles which follows on protracted inaction (as in different forms of paralysis) is by no means universally attended by fatty degeneration. On the contrary, the muscle may for a long time present no change but the diminution in bulk and number of its muscular fibres; and these may even gradually disappear altogether without the intervention of the fatty change. In other cases, as in the one recorded by Lebert (of spinal paralysis without mental alienation) some of the muscles presented fatty degeneration, while others, also extremely atrophied, had a good colour, and, as to the ultimate fibre, a normal appearance. In the progressive muscular atrophy, described by Aran and Cruveilhier, almost all these different conditions occur; and some of the muscles presented a quite gelatinous appearance without the evolution of any fatty particles, which nevertheless were at other places present in large amount.—*Ed. Med. and Surg. Jour.*

MEDICAL PATHOLOGY AND THERAPEUTICS.

1. *Treatment of Ascites by Iodine Injections.* By M. HENRI GINTRAC.

In the "Journal de Medecine" of Bordeaux, of August 1854, the first part of a paper by M. Henri Gintrac is published, "On the treatment of Ascites by Iodine Injections."

M. Gintrac traces back the introduction and adoption of this mode of treatment, mentioning the various substances which were previously in vogue ere iodine was suggested.

M. Bonnet of Lyons was the first who proposed the employment of iodine solutions in dropsies of the articulations, but it was M. Velpeau who brought it prominently before the public. Reasoning from analogy, M. Dieulefoy of Toulouse was the first who put in practice the injection of iodine into the peritoneum (March 20, 1840), and since that time it has been frequently advocated. The following are the most important conclusions deduced by M. Henri Gintrac, from his experience.

1*st*, "The injection of the tincture of iodine into the peritoneum for the treatment of ascites, is generally free from danger.

2*d*, "The dose of the tincture may vary from thirty to eighty gram-

mes, added to a hundred grammes of distilled water, and two or four grammes of the iodide of potassium.

3*d*, "This remedy produces in certain cases the radical cure of the ascites.

4*th*, "It is especially indicated in idiopathic ascites, whether active or passive. It may succeed in dropsy, coincident with simple enlargement of the liver or spleen; with tumours of the abdomen of small size, indolent, not degenerating, and for some time arrested in development.

5*th*, "It is contraindicated in organic affections of the lungs, of the heart and bloodvessels, of the alimentary canal, kidneys, and uterus; in short, in any case where a serious lesion of any of the viscera exists. It is also not to be employed when the liquid in the peritoneum contains a certain quantity of blood or pus.

6*th*, "It may act in two ways:—1. By producing adhesive inflammation promoting the formation of false membranes, and adhesion of the intestines to the abdominal parietes. 2. By producing a special modification in the vitality of the serous membrane, in virtue of which the proper equilibrium between exhalation and absorption is re-established."

When we consider the admirable effects produced by the tincture of iodine on other less important serous cavities, such as the tunica vaginalis, cysts in the thyroid gland and ovaries, and cystic tumours beyond the reach of the knife, we are led to expect good results to ensue from the adoption of iodine injections in ascites. At the same time we must recollect that foreign bodies cannot be brought in contact with the peritoneum, without occasionally producing the most alarming consequences; therefore it can only be after all other less severe remedies have failed, that we may consider ourselves justified in adopting the treatment recommended in M. Gintrac's memoir. With this reservation, we hold the conclusions arrived at by that gentleman to be sound and judicious.

2. *Influence of Locality on Asthma.* By M. TROUSSEAU.

Trousseau, in a clinical lecture, relates the following remarkable case. A young man, 28 years of age, a native of St. Omer, had repeated attacks of asthma when resident there. On his going to London they ceased; and during the two years of his residence in *the city* he had not the slightest return of his complaint. At the end of this time he returned to St. Omer, and after four days he had a return of his symptoms. Three months later he went to Paris to consult Trousseau, and here the asthma left him in a short time. In the finest season of the year he went to Versailles, and was immediately attacked by asthma. He returned to Paris, and for six months continued free. After this he was obliged to return to St. Omer, and was there again attacked so violently he appeared to be dying. By Trousseau's advice he was carried on a hand-barrow to the railway station and brought again to Paris, where his sufferings once more vanished.—(*Gazette des Hôpitaux*, Nos.

29 and 34, for 1853; and Canstatt's *Jahresbericht*, 1853, vol. iii., p. 86.)

3. *On the Treatment of Crusta Lactea and Infantile Eczema.* By PROF. VON MAUTHNER, St. Anne's Hospital, Vienna.

The following treatment is adopted for cases of crusta lactea in St. Anne's Hospital at Vienna, by Professor von Mauthner. The crusts on the head are softened by the application of oil, and the scalp is covered during the process with oiled silk, or with a portion of an ox's bladder. In some cases the hair is cut, and the parts are washed with tepid water and soap. To prevent the eczema spreading to the forehead and eyes, he circumscribes its progress by means of a boundary of collodion. When eczema, affecting the face and extending under the ears, is discharging much matter, he orders it to be dusted with hair-powder; and when it is accompanied by great itching he applies the *ceratum cetacei*, according to this formula, ℞ *cetacei* ʒvj; *cerae alb.* ʒij.; *ol. olivar. opt.* ʒj. *Misce.* He has found warm baths of great service, but the use of cold water—in the form of baths, douches, or epithems—although it sometimes has a good effect, generally predisposes the children to severe diarrhœa, dropsy, and hydrocephalus. With this external treatment Mauthner always combines the internal use of an aqueous extract of walnut-tree leaves, in half-drachm doses dissolved in water. Cod-liver oil he uses occasionally, but he does not find it so beneficial, except where there is a complication of scrofula or rachitis.—*Journ. fur Kinderkrankh. Hft.* 9 *and* 10, 1853.

4. *Croton-oil in Dysentery.* By M. KONOPLEFF.

On the supposition that dysentery is generally dependent upon some serious obstruction in the bowels, the above author administers croton-oil for the cure of this disease. He adds from 1 to 3 drops of the oil to an emulsion composed of Aq. menth. pip. ʒvj., and Aq. Laurocerasi ʒj.—ʒij.; and of this mixture he administers to adults a table-spoonful, and to children a tea or dessert spoonful every half hour. After three or four doses copious stools are passed, at first with and thereafter without blood; and by carefully regulating the diet and administering mucilaginous drinks, after the use of the above mixture, the patient is speedily cured. Should severe diarrhœa follow the use of the emulsion, he alleges that it is easily removed by the Decoctum Salep combined with Aq. Laurocerasi, or Vinum Opii. In the event of the mixture causing irritability of the stomach and vomiting, he administers the croton-oil in the form of an enema, *without* Aq. Laurocerasi, but combined with from 3 to 10 grs. of Ext. Hyosciami. Konopleff has administered a mixture containing one drop of the oil to ʒiv. of emulsion to infants at the breast, with the best results. He affirms that by means of this treatment he has never lost a single patient.—*Med. Zeitung Russland*, 48. 1853.

5. *On the Therapeutical Value of Ptyalism.* By M. Passot, of Lyons.

In a memoir published in the *Gaz. de Médicale de Lyon*, for June, 1854, Dr. Passot lays down the following propositions:—

1. There are cases in which mercurial salivation ought to be induced, no matter how grave may be its results.

2. Mercurial salivation has a double action; a revulsive action, far more energetic than that of the blister, and a *spoliative* action, or impoverishment of the blood.

3. Some individuals are insusceptible, and others extremely liable to ptyalism.

4. The surest method of inducing salivation, consists in the simultaneous use of calomel and mercurial inunctions.

5. It is doubtful whether salivation ever exerts *specific* influence.

6. Syphilis is not only curable without ptyalism, but it appears that the syphilitic manifestations cease to be affected specifically by mercury as soon as this phenomenon is manifested.

7. Ptyalism is especially indicated in peritonitis, metro-peritonitis, simple meningitis, corneitis, retinitis, amaurosis by congestion, in obstinate orchitis and ovaritis, and certain chronic engorgements unconnected with degeneration of tissue.

8. Mercurial stomatitis is to be treated by rubbing the gums with powdered alum (Velpeau); by painting the mucous membrane with chlorohydric acid (Ricord), or with a concentrated solution of nitrate of silver (Bouchacourt). Repeated purgatives, and the application of Saturnine lotions to the neck, are useful as adjuvants.

9. As soon as the state of the mouth will permit, the patient should be allowed a good diet and the use of ferruginous medicines to combat the debility induced by the mercurial intoxication. O.

6. *On Terebinthinated Vapour Baths in the Treatment of Chronic Rheumatism, Gout, Stiff Joints, Chronic Catarrhs of the Lungs and Bladder, Amenorrhœa, and Gonorrhœa.* By Dr. A. Chevandier of Die.

It had long been a custom amongst the inhabitants of the district in which Dr. Chevandier resided, to immerse their bodies in the vapour of the black pitch furnaces, in order to relieve themselves of chronic rheumatism, rigidity of the joints, and other maladies of like character, and thus it was that his attention was drawn to the subject. The body was exposed to these turpentine vapour baths for ten or fifteen minutes, and when deluged in perspiration, they were wrapped up until the excitement produced had passed off. The good effect of this treatment was undisputed.

Dr. Chevandier in his own person, tested the effects of the vapour bath treatment, and relates the phenomena resulting from its use. He says:

The resinous vapours, which were disengaged in the form of a light transparent smoke, far from causing suffocation or disagreeable burning in the throat, gave rise, on the contrary, to a pleasant and soothing sensation; an almost imperceptible tingling was produced in the skin, which became the principal seat of congestion; it was very hot, very red, and was covered with perspiration. The arterial circulation was accelerated, the pulse was developed, hard and full, and beat 88 in the minute; the pulsations of the heart were not troublesome; the head was free, burning; the face was very animated; there was no dullness nor nausea; even the conjunctiva was not irritated. I was streaming with perspiration, and yet had not experienced the weariness which precedes or accompanies that produced by ordinary means. At the end of twenty-five minutes, the respiration becoming more rapid, the determination to the head more decided, and the internal heat insupportable, I came out of the furnace*; I ran to my room, which was only a few steps distant; my step was firm; I threw myself into a well-warmed bed, keeping on my clothes and burning blanket, which was a little injured. The pulse soon rose to 95; the determination to the head became more decided; the beating of the heart caused the chest to heave violently. After some minutes all these symptoms abated; the pulse fell to 80; the palpitations ceased; perspiration set in so profusely as to penetrate the mattrass. I had taken an hour's repose, when, after having had myself wiped with flannel, I got up, put on warm clothes, and returned to my patients.

I had an extraordinary suppleness in my limbs, and experienced surprising agility; I did not feel weakened; I ate with more appetite than usual; at night my sleep was disturbed by dreams, in which hyper-excitement of the genital organs was not idle. The urine was highly coloured, and had a decided violet odour, but presented no sediment. I have since several times used the bath, which has never fatigued me.

The favourable results obtained in eighteen cases of chronic rheumatism in which this agent was used by Dr. Chevandier, make the whole subject worthy of notice. As an evidence of the efficacy of this mode of treatment, we will state that there are ten vapour bath establishments now in existence in the departments of Drôme and Isère, all in successful operation. The author thus sums up his opinion with regard to this novel remedy.

Without waiting for the voice of experience, which concedes a great value to this therapeutic means, what are we to think, *à priori* of the possible advantages of its application to medicine? Its physiological effects, the general hyper-excitement produced by baths of terebinthinated vapour, warrant us in affirming that their employment will be almost coextensive with excitant medicine itself; and that, moreover, the special action of re-

* Even the sojourn of twenty-five minutes is long. In the Hôpital St. Louis the patients scarcely remain twenty minutes in the fumigatory boxes, and from ten minutes to a quarter of an hour in the vapour-bath, properly so called. It is, moreover, very remarkable that some hemiplegic persons may be subjected, without danger, to this treatment, the good effects of which have been confirmed by long experience.

However, I am far from regarding it as entirely innocous. It has happened, although indeed rarely, that in the bath or on coming out of it, a paralytic patient has been stricken with a fresh attack of apoplexy, which has proved fatal. It is therefore only with proper caution that this remedy should be permitted in such a case.

sinous bodies on the mucous membranes causes this method to be doubly indicated in chronic diseases of the skin, in catarrhal affections of the chest or bladder, and above all, in chronic rheumatism, gout, gonorrhœa of long standing, amenorrhœa, &c.

In my opinion the baths of terebinthinated vapour appear to possess a stimulant action, which may be employed beneficially in many chronic diseases already named. The effects they have produced in chronic rheumamatism and rheumatic gout are among the most rapid; and I have verified cures which may be truly called radical.—*Journal des Connaissances.*

7. *The Lacteal Secretion in Yellow Fever and Typhoid Fever.*

The *Moniteur des Hôpitaux* reports a case which recently occurred in the service of M. Beau, at the Hospital Cochin, of a woman who gave adequate nourishment to a young infant while suffering from a well characterised attack of typhoid fever. This woman bore the marks of a terrible attack of confluent variola; she stated that three years ago, while suffering from small-pox, she suckled an infant through the whole period of her sickness; the child was attacked with variola during the mother's convalescence, but passed safely through the disease. In both these cases the infants apparently derived no detriment from the milk of their sick parent.

Dr. Jourdain, dispatched by the French Government to observe the yellow fever which prevailed in Spain in 1823, and Dr. Montez appointed with the same object by the local junta of Guipuzcoa, report three cases of nursing women who fell victims to the epidemic, who nursed their young infants during their sickness, without any perceptible injury to the health of the latter.

SURGICAL PATHOLOGY AND OPERATIONS.

1. *Debate in the Imperial Academy of Medicine on the Curability of Cancer, and its Diagnosis by means of the Microscope.* Remarks of MM. Robert and Velpeau.

At a meeting of the academy on the 26th of September last a discussion on the curability of cancer arose. M. Robert declared that he doubted if encephaloid cancer were ever cured, whereupon M. Velpeau moved that the question should be brought before the academy at some early day, as all surgeons did not agree with M. Robert as to the incurability of the disease. He also expressed doubts as to the value of the microscope in the diagnosis of cancer, and undertook to prove its fallibility.

The Academy met on October the 15th, and M. Robert proceeded to say, that he considered the cure of cancer, especially of the encepha-

loid character, as a very rare fact. It seemed, however, that M. Velpeau thought differently. In his work on diseases of the mamma, that gentleman had operated on 250 cases who had survived the operation. He had lost sight of 100 of these patients after one year, 150 after two years, and 200 after five years. Of the 50 remaining, 20 had been free from the disease for so long a time that M. Velpeau considered them as radically cured. M. Robert considered this enormous proportion of cures as astonishing, more particularly when compared with the experience of other distinguished surgeons. Munroe reports 60 *operations* and 60 *relapses*. Mayo says that even after early operations more than 95 out of every 100 would relapse. Macfarlane collected 118 cases, in every one of which the disease returned. Such was also the experience of Boyer, Lebert and Broca. He therefore was forced to conclude that the favorable results in M. Velpeau's practice were owing to errors of diagnosis. Some of these operations had been performed more than twenty-five years ago, when even M. Velpeau might have been deceived. In truth during a discussion before the academy in 1844 on the difficulties of diagnosing tumours of the breast, M. Velpeau himself had declared that he was satisfied if he only committed *four errors in ten cases*, and M. Robert would call his attention to a singular coincidence; that the proportion of four errors of diagnosis out of ten, is precisely that of the successful cases in his statistics, viz. 20 in 50. He could not therefore admit M. Velpeau's infallibility, but believed that the various forms of mammary tumours had been confounded with each other.

M. Velpeau in reply, said that he did not pretend to be infallible, and was sometimes deceived, but there were some cases in which deception was impossible. If M. Robert meets with an ulcerated fungous, softened tumour, he could not be deceived, nor could he, if he meets one which is hard, knotty and uneven, and there are twenty such whom he could then lay his finger on, who had been cured for years. The speaker then gave the history of many cases of well developed encephaloid cancer, some of whom after a long interval of time, were now well.

M. Velpeau continued his remarks by declaring that he did not think the microscope infallible; he did not discourage microscopical researches, but he did not intend to discard the clinical indications. Was the discovery of the cancer all sufficient to determine the question? He feared not. There are several species of cancer, *with* and *without cells*. The truth was, and he would not attempt to explain it, *that the cell does not always exist in well developed encephaloid cancer, and it is sometimes found in tumours which are evidently not cancerous.* Many years ago, he had removed a sanguineous cyst from the lip of a young girl, in which M. Lebert had found cancer cells. The patient was soon well and the mother of many healthy children.

In a more malignant tumour of the calcaneum, cancer cells were discovered by the microscopists, and the following case he considered conclusive.

A woman, aged forty, had an encephaloid tumour in the right breast, of the very worst kind. She was young and looked healthy, and he

determined to remove it. The tumour was lardaceous schirrus, with here and there portions of cerebriform matter not yet softened. The tumour was cut into five pieces and sent to five microscopists. *None of them could discover a cancer cell in it.* The woman began to convalesce, and the micrographers were apparently triumphant; but after a few months the disease returned in the cicatrix, which was soon followed by general infection, and the patient died in ten months. Again: Fifteen years ago he had performed amputation for a diseased condyle of the tibia, which had cancer cells in it, and that patient was now alive and well. These things constrained M. Velpeau to think that the microscope had not yet settled the question of diagnosis, or the question of the curability or incurability of cancer.

2. *A New Method of Reducing Hernia.* By Professor SEUTIN.

"The illustrious clinical professor of surgery of Bruxelles," sings the Belgian *Presse Médicale* on its highest key, "has enriched our science by a new proceeding for the reduction of herniæ, which is destined to diminish still further the domain of operative surgery, which our celebrated compatriot has already restricted in such narrow limits." . . . "This method is most simple, and its execution is unattended with danger; it consists in *the rupture of the fibrous ring which produces the strangulation*, by means of the index finger passed through the inguinal ring."(!) . . . "M. Seutin first adopted this method in 1849; he has since practiced it frequently, with invariable success. On the 31st of March 1854, he relieved a hack-driver who entered St. Peter's Hospital in an almost desperate condition with strangulated inguinal hernia. M. Seutin, however, has not rested satisfied with these practical demonstrations; he has shown to Dr. Lombard, of Liege, and a number of other surgeons, the facility with which this manœuvre can be practiced on the dead subject, and the *modus operandi* of the relief of the stricture. Hereafter the operation of herniotomy will be rare, &c." We believe that M. Hannon conducts the *Presse Médicale*, a Dutch apothecary who floods the journals with accounts of new and useless remedies; we trust that he will in future confine his speculations to drugs, and let surgery alone. O.

3. *On Dental Caries among Diabetics.* By M. FALCK.

This author attributes the frequency of caries of the teeth in diabetes to the presence of free lactic acid in the saliva, dissolving the mineral part of the dental substance. He has proved by experiments that the substance of the teeth is unchanged by the action of pure solutions of sugar. The presence of lactic acid he considers due to the action of the saliva-ferment on the grape and diabetic sugar in the economy.—*Dentoche Klinik. Ed. Monthly Journal.*

4. *Dropsy of the Pericardium—Thoracentesis.* By Dr. BEHIER.

At a recent meeting of the physicians of the hospitals of Paris, Dr.

Béhier reported the case of a girl who entered the hospital *Bon-Secours* with great dyspnœa and oppression, disorderly movements of the heart and purulent expectoration. The left pleural cavity was distended by serous effusion, the heart was displaced towards the right, and the pericardial sac was filled with fluid.

A few days after her admission, the situation of the patient became very critical; there was extreme dyspnœa and anxiety, and the pulse was frequent and thready. Dr. Béhier determined to practice thoracentesis. A puncture was made with a fine trocart between the 7th and 8th ribs, on the course of a vertical line which would pass through the external edge of the left mamma. This puncture was not followed by the escape of any liquid. A second puncture was made in the 6th intercostal space, underneath the mamma, the trocart being directed inwards and backwards. Ten ounces of bloody serum followed the withdrawal of the stylet. Presently the canula began to oscillate synchronously with the arterial pulsations; when the hand was applied tothe instrument it was evident that these movements depended on the impulse of the heart. Moreover, it was easy to pass the canula along the walls of the heart, and to appreciate its form and volume.

The patient experienced great immediate relief, but died at the end of 28 days, from the progress of extensive pulmonary disease.

At the necropsy, it was found that the trocart had passed in the first instance into the thick false-membranes with which the costal pleura was lined. No trace could be detected of the puncture of the pericardium.

In the discussion which followed this communication, Dr. Roger, the collaborator of M. Barth in the famous *traité pratique d'auscultation*, remarked that Professor Skoda often practiced paracentesis of the pericardium, and that in a recent visit to Vienna he had seen a patient on whom this operation was successful.

Professor Requin observed that puncture of the pericardium was practiced long before Skoda; that Laënnec himself was its advocate.

O.

DIETETICS.

1. *On the Use of Alcohol, Tea, Coffee, and other Accessory Food.* By T. K. Chambers, M. D. (*Brit. & For. Med. Chir. Rev.*)

Amidst the ceaseless activity we see displayed on every side by the medical profession, it is very strange how prone it has been to neglect one of its most important branches,—we mean *dietetics*. The anatomist wields by turns his scalpel, his chemical solvents, or his micros-

cope; the physiologist now appeals to the laboratory, or presents a vivisection; the general practitioner flies from mineral to herb, from acid to alkaloid, in search of the health giving power; whilst all the time the vital questions appertaining to the proper diet of our species seems to have been, comparatively speaking, unnoticed.

That our profession has been greatly derelict on this point, and that the public is aware of the fact, can be easily shown. Look at the successes of the homœpath or the hydropath. See how often our regular troops, with the prestige of centuries around them, and the names of innumerable brilliant discoveries painted on their banners; notice how often these well drilled veterans, under the leadership of the most profound and scientific generals, have been defeated and overthrown by these ignorant and undisciplined Cossacks, who spread themselves over the whole country in pursuit of plunder, and succeed admirably in their object. Why is this so? Can we deny that the practice of the homœpath is often successful, and gains for him a wonderful name and reputation, only because he takes hold of some poor creature who has been making his stomach an apothecary shop under the direction of some medical enthusiast who ascribes to each drug a cabalistic charm, and expects to find a specific in every new chemical? Such a patient, the sensible homœpath coaxes from his bad habit with infinitessimal potions, and whilst he tickles his imagination, he lets his stomach rest, and restores it to its original use. He selects the best diet; he watches and encourages the returning appetite; he stimulates and nourishes. Behold, he has made a wonderful cure, and all the people sing hosannas to his praise. The hydropath, too, knows well the virtues of fresh air, cold water and simple diet, and the broken down roué, or the victim of fine dinners and exciting drinks, men who have had all the great physicians to patch up this worn out organ, or palliate this vicious habit, are astonished to find themselves rapidly recovering their long lost health, under the magical influences of these simple agents.

These remarks have been suggested by the perusal of an article from the pen of Dr. Chambers of London, in the October number of the Medico-Chirurgical Review, upon one branch of this interesting question. In this paper Dr. Chambers details many experiments of the German school of medicine, made more especially to determine the uses of those various articles of diet, such as alcohol, tea, coffee and other articles of food of like character, which are generally looked upon as being not necessary for the sustenance of animal life, but rather as luxuries which might be discarded without producing any mischievous consequences. In a few words, the object of these experiments is to ascertain why all men are prone to the use of such articles of diet as those enumerated, and what effect they have upon the nutritive functions, whether for good or for ill.

The most interesting experiments alluded to in this paper are those made by Dr. Bocker on his own person, and with an accuracy and carefulness of detail almost indescribable. The experimenter first determined by various preliminary trials, what quantity of food and drink was just sufficient to satisfy his appetite, and keep him at his usual

weight. He then began, by adding to this standard diet, some one of the articles with which he desired to experiment, and carefully noting what variations were produced by the use of this article upon the various secretions and excretions, and the first subject selected was *water*.

The experiments were thus conducted; his usual diet being continued, his weight ascertained, the amount of fæces and urine weighed and analysed, the quantity of carbonic acid exhaled, and the insensible perspiration estimated; he adds to his daily amount of food 1260 grammes, about 2½ pints of water. For a period of seven days he carefully watches the phenomena produced. He continues to take the same amount of exercise, and his habits in every respect being as usual. He ascertains that during this time, with just the same quantity of food, he *loses* daily 589 grammes; that the fæces and urine are increased in quantity, and that the amount of water daily excreted in the fæces and urine was greatly in excess over the quantity drunk—whilst the carbonic acid exhaled, and the insensible perspiration, was not sensibly changed; the quickness of the pulse and respiration remaining stationary.

For another period of seven days, continuing the same diet and with the same exercise, he adds 3360 grammes, more than seven pints of water. The same results in a greatly increased degree are seen to follow. He loses now daily 834 grammes. The quantity of fæces and urine are much augmented, and the water passed is still more in excess over that taken. Here then are his conclusions:

1. That water increases the interstitial metamorphosis of tissue and consequent loss of weight.
2. That the decomposed tissue is excreted partly by urine and partly in the solid fæces.
3. That the water formed in the organism by the change of tissue is augmented, as well as the nitrogenous constituents of the excretions.
4. The excretion of carbon by the lungs and the quickness of the circulation and respiration are not affected.
5. The necessity for food increases and keeps pace with the metamorphosis of tissue.

This last important result is proven by the fact that the desire for food had much increased, and there was at the same time much langour after taking the usual amount of exercise.

See then the effect of water on the human organism. It hurries on the metamorphosis of tissue; it makes the wheel of life turn faster, and if the supply of new matter is equal to the exhaustion of the old, the tissues are kept in a more perfect state; they are newer and brighter. Hence if a man can get as much as he wants to eat, the use of water is wise; it keeps him more lively and active; but wo to him who is on short allowance—the use of water is an extravagance.

Again,—to those who have a weakness of the digestive organs, this is an important enquiry. The less water drunk, the less food is needed, and therefore the less strain upon the enfeebled functions of nutrition; but we must pass on to *alcohol*.

The experiments of Dr. Booker on the actions of alcohol appear to have been made in the same careful way as those detailed. With precisely the same amount of diet he took eight times a day a teaspoonful of spirits of wine. Here are his deductions:

1. Alcohol *diminishes* the excretion both of the solid and fluid constituents of the urine.

2. Alcohol does not increase the perspiration in anything like the proportion that it diminishes the urine.

3. Alcohol does not augment the fæcal excretion.

4. Alcohol *diminishes* the exhalation of carbonic acid by the lung.

We thus perceive that the action of water and alcohol on the system are antipodean; the one hurries on the metamorphosis of tissue; the other delays it. The one increases the necessity for food; the other diminishes it, and in the language of Dr. Moleschott:

Alcohol *is a box for savings.* A man who eats little and drinks moderately of alcohol, retains in his tissues and blood more than he who, under corresponding circumstances, eats more without taking beer, wine, or brandy. Clearly then, it is hard to rob the labourer, who in the sweat of his brow, eats but a slender meal, of a means by which his deficient food is made to last him a longer time.

It is very much to be feared, however, that too often this *box for savings* is put to a very poor use, and the argument on the opposite side is at once suggested. If alcohol limits the consumption of tissue and the necessity for food, whilst the machine keeps up its work just in the same way; whence comes its strength?—Is the man in other words, living on his income, or is he trenching on his capital?

Suppose this to be true. A man may so spend his capital as to bring him afterwards a better interest and leave him in a more prosperous condition than before. The *nervous energy* is excited, and hence the machinery runs just as well with less food, but under a higher pressure; the nervous exaltation when kept within proper bounds, adds to our pleasures and ennobles our ambitions. The instincts of our race towards its use are irresistible. It is a natural medicine, which in some form or other must be used, and rather let us teach by such scientific experiments as these, how to place its medicinal virtues in that form least calculated to do mischief and equally adapted for good. The manufacture of beer and porter; the raising of grapes suitable for wine, and the discouraging in every way, the distilling of the more powerful and noxious agent; all these are vital questions on which we cannot now dilate, and we will close this subject in the language of Dr. Chambers, to whose eloquent essay we have frequently referred.

The reader must believe that it is under a great sense of responsibility that these few sentences in favour of the use of alcoholized stimulants are laid before him. It is superfluous to say how the use is defiled by the abuse, how the curse rings out so loud that the quiet blessings are unheard. A Silenos may well cry, in merited repentance—

"Ὦ Βρομίε, διὰ σὲ μυρίους ἔχω πονούς,"

but a thoughtful, reverent mind may discover sufficient evidence that the

good outweighs the ill, and instead of condemning with superficial haste as an enemy the powerful agent he sees before him, will try and make it more and more friendly to his species. To such a mind the following considerations will possess much interest.

Alcoholized stimulants are not all alcohol. Their power over the nervous system and mind does not bear even a direct ratio to the quantity they contain. Many other ingredients certainly contribute much to their gladdening of the heart, and very probably, also, to their benefit to the body. Sugars, acids, essential oils in great variety, fruity ethers constituting the flavours or "bouquets" of wines, tar, turpentine, &c. are the differences between one and another. A certain quantity of alcohol seems indeed essential to their wholesomeness and popularity; but experience shows that many of these compounds which contain almost a minimum amount of it, are most beneficial to the individual, and therefore to the nation. In using these the temperate man is less likely to exceed by error, and the indiscreet is under less temptation. They have the same advantage as finely graduated scales over coarse ones, they are a better measure. As a rough rule, it may be said, that those fermented drinks are most worthy of approbation which will produce the greatest amount of comforting and exhilarating effect with the least amount of alcohol, reserving, however, the possibility that there is a certain minimum, beneath which the alcohol should not descend.

Our space is so nearly exhausted that we must hurry over the remainder of this interesting subject. The experiments of Bocker with tea and coffee are too important to be passed by without any notice. These experiments were made with the greatest accuracy, and repeated again and again, at different seasons of the year, always with the same result. However incorrect they may be in some particulars, their general truth can hardly be questioned. We again refer the reader to our text.

Tea, Coffee, and Chocolate, have a much less suspected character than alcohol: it is only as medical men, and in exceptional cases, that we can be called upon to say anything against them. And even then we can often avoid a direct condemnation by modifying the times and modes of taking them. No accusation having been made of social or individual injury of calculable extent resulting, and a very decided gratification occurring, there can be no doubt of their use being a gain to the nation. They are a pleasure without consequent pain.

But shall we attribute no further value to these articles? Shall we say that money to the amount of twenty-six millions sterling, annually spent by our country in their purchase, is laid out on a temporary titillation of the nerves, and that just as much has to be expended on other food as if this luxury had not been imported?

Such questions are answered by an equally elaborate and self-sacrificing collection of experiments upon himself by Dr. Böcker, and detailed in the paper named at the head of this article, for the purpose of testing the effects of tea on the organism. The first set of the first series consists of seven observations of twenty-four hours' duration each, in the months of July and August, with three barely sufficient meals *per diem*, in quantities as nearly equal each day as could be managed, and with only spring water to drink. The second set comprises the same number of observations in August, September, and October, under similar circumstances, except that infusion of tea, drank cold, was taken instead of plain water. Each day

there are carefully recorded the quantity of urine, of eighteen of its ingredients separately, the weight of fæces and of the water and solid matter contained therein, with the degree of alkaline reaction, colour, and odour, the amount of insensible respiration and of expired carbonic acid, the quickness of respiration, the beats of the pulse, together with accurate notes of the duration of bodily exercise in the open air, the loss of weight in the whole body, the general feelings, and the circumstances, thermometric, barometric, and meteoric, under which the observations are taken.

The results of these observations may be briefly summed up as follows:

1. Tea, in ordinary doses, has not any effect on the amount of carbonic acid expired the frequence of the respiration, or of the pulse.
2. When the diet is insufficient, tea limits very much the loss of weight thereby entailed.
3. When the diet is insufficient, the body is more likely to gain weight when tea is taken, than when not.
4. Tea diminishes very much the loss of substance in the shape of urea.
5. It lessens remarkably the quantity of fæces secreted.
6. The loss by perspiration is also limited by tea.

Parallel with these observations, there run a series of experiments with coffee made by Dr. Julius Lehmann on two individuals, the results of which we append, in order to render our subject complete.

"1 That coffee produces on the organism two chief effects, which it is very difficult to connect together—viz., the raising the activity of the vascular and nervous system, and protracting remarkably the decomposition of the tissues.

"2. That it is the reciprocal modifications of the specific actions of the empyreumatic oil and caffein contained in the bean which call forth the stimulant effects of coffee, and, therefore, those peculiarities of it which possess importance in our eyes—viz., the rousing into new life the soul prostrated by exertion, and especially the giving it greater elasticity and attuning it to meditation, and producing a general feeling of comfort and cheerfulness.

"3. That the protraction of metamorphic decomposition which this beverage produces in the body is chiefly caused by the empyreumatic oil, and that the caffein only causes it when it is taken in larger quantity than usual.

"4. That caffein (in excess) produces increased action of the heart, rigors, derangement of the urinary organs, headache, a peculiar inebriation, delirium, and so on.

"5. That the empyreumatic oil (in excess) causes perspiration and diuresis, quickened motion of the bowels, and augmented activity of the understanding; which may indeed, by an increase of dose, end in irregular trains of thought and congestions, restlessness and incapacity for sleep."

The distinct statements of Dr. Lehmann and the daily records by Dr. Böker of his feelings and sleep, of the colour, smell, and consistence of urine and fæces, show that the subjects of these experiments were in a practically normal state during the whole of the time they were under observation, so that any fallacy supposed to arise from pathological causes for the variations in the bodily phenomena is excluded. We may take them to represent the real effects of tea and coffee on a healthy person.

What an important effect this is! The tea and coffee drinker may have less to eat, and yet lose less weight—wear his body out less—than a water

drinker. At a comparatively small expense he may save some of the costly parts of his diet, those nitrogenized solids that entail so much thought, labour and anxiety to obtain. The loss of carbon indeed goes on much as usual, and a moderate outlay will supply that—but what an economy it is to spare the quantity consumed of meat, bread, milk, and all the most expensive viands.

After examining these experiments, which were carried through a period of years, made on different individuals, and with an accuracy of detail truly astonishing, we are forced to arrive at these conclusions:

1. That the use of water hurries on the metamorphosis of tissue, creates a demand for increased amount of food, and although to the well-fed citizen it may be a luxury, to the poor man it must be considered as an extravagance.

2. That the alcoholised stimulants in their least objectionable form—such as beer or light wines—reduce the necessity for food, delay the wear and tear of the system, and, by restoring the mental powers to a healthy and active condition, and counteracting the depressing influences of poverty and intense physical labor, should be looked on as a class of agents towards which mankind will ever instinctively turn, and whose use may be and should be greatly modified and restrained, but can never be entirely prevented.*

3. That tea and coffee are both agents of great influence and comfort in the animal economy. Acting somewhat in an analogous way with the alcoholised stimulants, they are free from the many objections to be urged against the continued use of the more powerful but dangerous principle, and whilst they delay the process of absorption, and reduce the necessity for food, yet brighten and stimulate the mind, and thus enable us to do without much physically, and bear with much mentally; our necessities are made less whilst our pleasures are made greater. The mind is thus enabled to triumph over the body, and the sorrow or privation which would strike its barbed arrow deep into our heart, under the blessed influences of fragrant Bohea or aromatic Mocha, now passes harmlessly by.

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* It is surely not wrong to call the inclination to alcoholic drinks an "instinct," when we see the difficulty of forging chains sufficiently strong to restrain men from them. The editor of the 'Band of Hope Review' states, that of 500,000 in the United States who had taken the solemn vow of abstinence, 350,000 broke it—an awful outburst of nature! Have the same proportion ever broken vows of chastity or any other solemn obligation.—*T. K. Chambers.*

THERAPEUTICAL RECORD.

Albuminuria of Children.—The dropsy which follows the scarlet fever, and is accompanied with albuminous urine, has been generally treated with diuretics and renal stimulants. The impropriety of this practice is well proven by Prof. Von Mauthner, *Journal fur Kinderkrank*, in an article contributed to that valuable journal. The professor advises, under such circumstances, the administration of milk as an exclusive article of diet, or it may be combined with rice and the free use of the althea or flaxseed mucilage. The action of the kidneys will be thus regulated so as to check the secretion of albumen. Together with this, it is often necessary to combine an alkaline treatment to alter the condition of the urine, and here M. Von Mauthner prefers the alkali of the urine itself. He advises the administration of pure urea, or the nitrate of urea, in doses of the third of a grain. After six or eight grains have been taken, he has frequently seen profuse diuresis occur with complete relief to all the symptoms.

Catarrh.—Professor Seifert, of Vienna, recommends warmly in the *Annal. Méd. de la Fland.* the use of cigars medicated with henbane in the treatment of pulmonary catarrh, having had personal experience of their efficacy. The cigars should be made from tobacco from which the acrid principle has been removed by maceration; and each one should contain eight grains of powdered hyoscyamus. The patient may smoke from 4 to 8 daily. (This is the dose for Germans)

Cutaneous Diseases.—Traumaticine, or the solution of gutta percha in chloroform, so warmly recommended by the late Professor Graves, has been much used in Germany, and has met with general favour. Dr. Eulenburg, of Berlin, announces (*Algemeine med. cent. zeitung.*) that he has succeeded in curing cases of inveterate psoriasis and chronic eczema by the persevering application of traumaticine, which is strong testimony in its favour, when we consider the obstinate nature of these two forms of skin disease.

Dysentery.—We noticed in the first volume of this Journal (p. 48), the statements of Dr. Eimer in regard to the efficacy of iodine injections in the dysentery and chronic diarrhœa of the adult. Dr. Eimer's experience was corroborated by M. Delioux, the chief naval physician at Cherbourg, whose paper on this subject was extensively noticed in this country. Recently, Professor Mauthner has warmly recommended this same treatment in the diarrhœa and dysentery of children. (*Journal fur Kinderkrankeiten.*) Two enemata are usually sufficient, according to the celebrated physician of Vienna, to arrest bloody discharges and tenesmus. This is the formula employed by Mauthner: R. Cretæ

prep. gr. vj; iodinii tinct. gtt. vj; Aquæ dist. gr. LX. ad gr. C. For two injections.

Dyspepsia.—Dr. Handfield Jones, (*Assoc. Jour.* Sept. 1854) from theoretical views of the process of digestion, has been led to employ lactic acid in cases of what he terms "irritative dyspepsia." Twenty drops of lactic acid in half an ounce of water may be administered during a meal in all of those cases in which it seems desirable to increase the tone and energy of the stomach. We have much respect for the chemical researches of Dr. Jones, but we believe that the general use of any acid in dyspepsia would be deleterious. Observation has established, we think, that alkalies are more appropriate in the greater number of cases of that disease.

Impotence.—Dr. Schulz details in the *Wiener Wochenschrift* a number of cases of impotence, which he has treated successfully by means of electricity applied to the peripheric extremities of the nerves, on the glans, the dorsum penis, the scrotum, etc. One old gentleman, in particular, is mentioned, who had not had an erection for fifteen years, whose penis assumed a state of formidable turgescence under the discharges of Dr. Schulz' battery.

Incontinence of Urine in Children.—This troublesome complaint in young children is said to be easily checked by the use of powdered cubebs. Dr. Deiters, in the *Preuss Verein Zeitung*, states that the complaint arises from one of two causes, either from atony of the bladder or intestinal worms. In the one case the cubebs is a useful tonic; in the other a valuable anthelmintic. Two pinches of the powder should be frequently given, and to large children even a half teaspoonful thrice daily, will be found very effectual. It will be necessary to continue its use for some weeks.

Nocturnal Emissions.—The free use of powdered cubebs is alluded to, in a paper in the *Preuss Verein Zeitung*, by Dr. Deiters, as a very valuable remedy for the nocturnal emissions we meet with in cases of spermatorrhœa. We suggest a trial of this safe and simple drug under such circumstances.

Profuse Salivation.—Prof. Espenbeck in the *Hanover Corresp*, suggests the extract of belladonna in two grain doses as a prophylactic against mercurial salivation. He declares that he has frequently checked a violent salivation in twenty four hours by an emulsion of this extract, and also, that when used in conjunction with the mercury it will prevent this disagreeable occurrence.

Sore Nipples.—Dr. Bourdel, assistant professor at Montpellier, states in the *Gazette Médicale* of Toulouse, that for the last ten years he has used with advantage the simple tincture of benzoin in the soreness of the nipples occurring during lactation, whether the fissures were superficial or deep, large or small, recent or of long standing. The tincture

is applied with a camel's hair brush, and forms a layer which protects the nipple from the contact of the air and clothing. The first application causes some pain. The child takes the breast without repugnance as soon as the liquid has dried. A cure may be anticipated in from three to twelve days.

Scrofuloid Cachexia.—In the *Würtemburg Corresp.* a paper by Dr. Höring, on the use of the extract of beef's blood in cachexia, has attracted our attention. This extract is made by straining the blood of the ox through a fine sieve, and drying and powdering the residue. Höring gives of this medicine some twenty or thirty grains in twenty-four hours. He has found it beneficial in spinal curvatures with an atony of the muscular power, and also in cases of tuberculosis.

Vomiting.—Dr. Lobach (*Wurtzbury Verhandl.* Vol. 3) adds the weight of his extensive experience to the opinion which has been repeatedly advanced of late in regard to the utility of the tincture of nux vomica in cases of obstinate vomiting during pregnancy. The nux vomica is given in doses of four drops every two hours.

BIBLIOGRAPHICAL RECORD.

I. *A Systematic Treatise, Historical, Etiological, Practical, on the Principal Diseases of the Interior Valley of North America, &c.* By DANIEL DRAKE, M. D. Edited by S. HANBURY SMITH, M. D., &c., &c., and by FRANCIS G. SMITH, M. D., &c., &c. Second Series. Philadelphia: Lippincott, Grambo & Co., Publishers. 1854. From J. Woodhouse.

We take up this volume with a great deal of pleasure. It cannot, it is true, be said to be all which might be desired in a work of its kind; perhaps it is not so perfect in the arrangement of its matter and in the classification of its details as it would have been had its lamented author lived to carry it himself through the press, still it is possessed of extraordinary interest to the American physician, and that too in many points of view. The rapid settlement of the great interior Valley of North America constitutes one of the marvels of the age. Almost within the brief space of a single life have its massive forests disappeared, its wide cane brakes been cleared away, and its rivers and lagoons become dismantled of the luxurious fringework of floral beauty and dense foliage which protected their borders. The soil which was thus rapidly exposed to the action of the sun's rays, and other influences tending to their development, was not only charged with morbific ele-

ments which had been the accumulation of ages, but also with such as had their intensity greatly increased by the climate of the region, and by the peculiar qualities of its own rich alluvium. Now when we consider that settlers from every quarter and of different races came suddenly in contact with these influences, it must be evident that an opportunity, great as it was unique, was presented to the medical philosopher, for the study of the human constitution when impressed by the greatest variety of external agents, many of which were of a novel and peculiar character.

So rare an opportunity to contribute to our knowledge of the laws of disease, under so many different circumstances, did not fail to arrest the ardent mind of Professor Drake, who had become in early life identified with the medical history of the west. Conceiving of its value and importance to science; amid the hardships and toil of professional life, arising superior to the spirit of money getting, and to the more seductive influence of speculations so peculiar to his time, he set about collecting the materials for the medical history of this interesting period and region. The work before us, a massive volume of nearly 1000 pages, is the second series, which have been the result of these labours. The book may be defective, in some respects, it may have its faults of arrangements, and its erroneous conclusions, but we forget all in the contemplation of the magnitude of the undertaking, and in the noble spirit—the great hearted love of Science and of his race, which dictated its execution. Coming to lament his inopportune death, the thought is obtruded upon our mind of how mysterious is our relationship to the ends of Providence; for many a drone lives, the inefficient still prosper, yet death passed them all, preferring him.

It may be that there is not at hand another to take up this great work of observation, which he has left incomplete. But we do not despair; such an one will come. The great value of the careful study of the laws of disease and the laws of health; the correct understanding of how the human constitution is influenced by external agents, so as to promote its perfection on the one hand, and to secure it against harm on the other, must in time be fully appreciated, and rise above all other considerations.

The very importance of the subject will be the propelling power. It will unbidden intrude itself upon the mind, cutting into the brains of the gifted and those appropriate for the work, like steel points, urging them irresistibly on to its faithful prosecution.

The great size of this book, together with the variety of its contents, it must be evident, will preclude anything like a review, or even an analysis of its pages. Such an undertaking would be inconsistent with the limited space to spare usefully in a monthly journal. We regret that we cannot go fully into its consideration, but we must console ourselves by urging it upon our readers to supply themselves with a copy of the book, for their own perusal, which it will amply repay. They will find in it many valuable suggestions, not to be found elsewhere, unless it be in the range of their own individual experiences.

This is one of the most interesting features of the western practice, which it portrays. In older settled countries, endemic and often epidemic, diseases pursue a settled course, leaving ample time for the application of established rules of treatment. In, particularly the southwest, the case is different. There morbific agents acquire an intensity and malignant power, almost unknown elsewhere. Nor is that all, this concentrated element, so powerful on any constitution, is frequently expended upon unacclimated individuals. In such an event the man is struck down, as by a great blow. It is these great emergencies, therefore, which have made their physicians so fruitful in resources, and so bold in their application of remedies, leading to many important additions to practical medicine, and furnishing many valuable suggestions, even to us, who usually have to treat disease in a less violent form. As a specimen of the character and value of the work, and of the faithfulness of its execution, we have thought that we could not do better than to turn to the section devoted to an account of epidemic erysipelas, and to present a brief summary of its contents, hoping thereby to secure to the whole book the attention which it merits. This was certainly the most curious epidemic which has ever pervaded our country. Such a tendency in erysipelas, we believe, was not before generally thought to exist, and the author says, "as far as I know or can learn, our interior valley has never experienced but one epidemic visitation of erysipelas." Professor Drake furnishes a history of this epidemic which indicates the greatest research, and it is given in a manner remarkably succinct and clear.

Its chronology and geography is exhibited in a well arranged table, which enables the reader at a glance to trace its course from its outbreak in Burlington, Vermont, in the year 1826, down through its various meanderings, to the city of New Orleans which it reached in the winter of 1848-49. Although the disease had prevailed in Vermont as early as 1826, yet it does not appear that it began to assume a severe form, or to have begun its regular course as a spreading epidemic, until 1843-4. We then hear of it in the town of Aurora, Indiana, and on the shores of Lake Champlain, in Vermont, from which it gradually advanced southward, taking according to our author the "same line of march as that pursued by the epidemic of cholera in 1832, which "traversed the interior valley from the estuary of the St. Lawrence to the delta of the Mississippi." Whilst pursuing this course, it often deviated laterally, appearing in the southern part of Virginia in the winter of 1844-5 with great malignancy.

In the admirable account which is given of the nature and treatment of the disease, the able accounts of it by Sutton, Hall & Dexter, Bennett and others, are advantageously used to illustrate its character.

With regard to its contagiousness, in view of the facts which he has himself furnished, and of the observations of many others with regard to this point, our author expresses himself with more caution than we could have expected. The able paper of Dr. Bennett of Bridgeport, Connecticut, published in the New York Journal of Medicine for July

1853, on the disease, in our opinion settles unequivocally the question of its contagious character.

With this imperfect sketch of this section, close our notice of this interesting work. The publishers have sent it out in good style, making it a handsome addition to the library.

II. *Universal Formulary, &c. &c.* By R. EGLESFELD GRIFFITH, M. D. A new edition. By ROBERT P. THOMAS, M. D., With Illustrations. Philadelphia: Published By Blanchard & Lea. From A. Morris.

This work constitutes an exceedingly valuable compilation. In addition to its systematic and extensive formulary, the book embraces tables of weights and measures employed for pharmaceutical purposes: explanations of abreviated latin phrases used by physicians in writing prescriptions: important and practical therapeutic suggestions; and well arranged posological and toxicological tables. These last are alone worth the price of the work. The medical student, whose pecuniary circumstances have denied him the privileges of a classical education, will hail with delight, the advent of this work; as enabling him to overcome difficulties which otherwise might prove insurmountable. While, however, we consider the abolition of Latin phraseology a dangerous innovation tending to lower the already low standard of medical training in this country, we cannot refrain from cordially commending the work to every student of medicine.

III. *On the Nature, Signs, and Treatment of Childbed Fevers, &c. &c.* By CHARLES D. MEIGS, M. D., Professor, &c. &c. Philadelphia. Published by Blanchard & Lea. (Received from George A. West.)

How often does it happen in our intercourse through life that we meet persons towards whom we take up a prejudice, even a positive dislike, for which we can frequently give no better reason than the oft quoted couplet:

> "I do not like you, Dr. Fell,
> The reason why, I cannot tell."

Sometimes we attribute this repugnance to some awkwardness of gait, or again, it is an affectation of speech; now it is a silly laugh, or it may be a simpering lisp; but, however this may be, we are satisfied with the correctness of our first impression, and it is only when some cause or other springs up and puts us into closer and more exact apposition to the person in question; something which draws back the forbidding curtain which has veiled from our eyes his talents or his virtues; it is when mind looks into mind, and heart beats against heart, that at last we find out our error and do justice to those high qualities which an unfounded prejudice had concealed from our eyes.

Some such feeling as the one alluded to, has always been at work in us whenever one of Dr. C. D. Meigs' books has happened to be pre-

sented to our notice, and it is not at all strange that the same kind of emotion which we feel for the person should be extended to his book, more especially when, as in this instance, we only knew the individual through his book. Therefore we frankly say, that in every work we have read from the pen of this most worthy and respectable gentleman, we have seen mixed up, though it was with a vast deal of valuable experience, and profound erudition, so much affectation of manner, so much effort at effect, and such shocking and oft repeated violations of all the rules of good taste, that the true merits of the production were almost lost in the feeling of disgust produced by the laboured simplicities, and startling commonplaces, which were found on every side.

Do we use plain language? it is because we wish to be explicit. We desire to acknowledge an error, we want to confess to a prejudice which, though we have shown it to be natural, we believe is unjust. We wish to say, with all frankness and candour, that the profession has received too much benefit from the works of Dr. Meigs—yea, that we have ourselves derived too much advantage from their perusal, to permit any longer these mannerisms and affectations to affect our judgment. This last book on childbed fevers (so called) makes us take this position still more firmly. It has all the meretricious graces, all the provocatives to criticism, though in a less degree to be sure, which we have heretofore found, but the subject itself is handled so well, so thoroughly, with an amount of practical knowledge and learned disquisition so far in advance of anything which we poor "sophomore scollards" could ever reach, that we ground our arms like soldiers overcome by superior force, and make our recantation public. There is too much heart in these books, a warmth of feeling which rings like the genuine metal, and an earnestness of purpose which is too natural not to be true, which works upon us. We do love an earnest, hearty, impulsive man, or book either, (for books have as much individuality about them, and more too, than most men in these common place days,) and therefore we say, (being in a poetical mood these Christmas times, and wanting to be at peace with all the world,)

"Professor, with all thy faults we love thee still."

We like this last treatise on childbed fever, more especially because it kicks over board all those notions of the contagiousness of puerperal fever, which have encumbered our literature for many years. Why cannot this phlegmasia be epidemic just as well as any other? Do we not see tonsillitis epidemic, or pneumonia? Have we not had an epidemic of *whitlows* here in Virginia for the last twelve months, a predisposition to that peculiar form of inflammation, which has extended from the Blue Ridge to the sea board? So we can have epidemic puerperal inflammations.

The next and last virtue, especially worthy of attention, is the professor's earnest advocacy of the use of the lancet in these inflammations. He carried our last entrenchments there. Yes, oh thou, potent little blade of steel, "although we've done thee such despite," the question of life or death ofttimes hangs upon thy point, and in these

degenerate days, when the crimson ribband and all the other insignia of that once familiar operation is almost forgotten, when doctors boast of not having bled a patient for eighteen years, when indeed we may truly say "that Evan's occupation is gone," how refreshing it is to hear the clarion tones of the professor, as in the work before us, he calls us to the rescue of this noble instrument. We were conquered then. What if our author will write his tedious preface of eight pages, or invent new words to encumber still more our science, already over loaded with useless jargon and pretentious technicals; what if his books need a "glossary for the benefit of the English reader." "Ephraim is joined to his idols, let him alone." It is a pity, but he will do it. Yet, in spite of all this, when we read his description of a childbed fever case in the treatise before us, we feel that the pen which wrote those words had a clear head, and more yet, a large and a warm heart to guide it. The man who wrote that chapter can afford to have many faults, and so we say, go on Elijah, Oh much abused prophet, cease not from your labours; we have repented of our sin in sackcloth and ashes, and intend hereafter to read every book you write, though we have to decipher words and sentences which would have puzzled the great lexicographer himself. M.

IV. *Physician's Visiting List for* 1855. Published by Lindsay & Blakiston. (Received through A. Morris.)

We must not neglect to return our thanks to Messrs. Lindsay & Blakiston for the neat copy of the "Physician's Visiting List for 1855," received from them. As for recommending this little book to the profession, that is useless, for every body buys it now, and in truth, it is such a convenience to a lazy doctor, that it is astonishing how we could have done without it so long.

EDITORIAL AND MISCELLANEOUS.

Reader, a new year has come, and with it the beginning of a new volume. It is an interesting season for us to have a talk together, for the time modifies our feelings strangely; it softens the asperities of life; it smooths away the cutting angles constantly glancing around us in our daily pursuits; it stops, indeed, the habitual current of our thoughts, and at the same time, causes in the heart a genial flow of feeling which eminently disposes us to think of absent friends.

We want to avail ourselves of this happy hour to call your attention to the Virginia Medical and Surgical Journal, and to its humble labours in behalf of medical science.

Do you not remember, reader, that dull half an hour before breakfast; that dismal rainy day; that lonesome winter evening, when your heart was worn, your feelings fretted by the cares of your stern calling; when you sighed for that sympathy which no one grants to the medical man; how you turned over its pages, forgot all in the perusal of its varied matter, culled, with much labour and expense, from many different sources, and arose refreshed; and encouraged, went on your way with more hope and a firmer resolution?

We are sure you do, and if so, suggestions with regard to the labourers in this field which you have gleaned with so much comfort must arise in your mind, which we need not mention. To our many correspondents, who have contributed so largely to our success, we return grateful thanks, greeting them at the same time with the choicest compliments of the season.

Many of their papers have been copied extensively by the press; and the merits of all are well attested by the constantly increasing patronage extended to our work. They are in the right track, and to them we have only to say, that they must go forward as they have begun.

But there is a large class whom we would still have as correspondents, and to these we beg to address a few words. Some misconception prevails with regard to the character of contributions most acceptable to the press, and most useful to science, which we think, has withheld much valuable matter. One source of this is very happily illustrated by a remark once made in our presence by a friend, who said that he could report many interesting cases, but the remarks which it had become a custom to append to them, frustrated the design. The idea prevails that a scientific explanation should be given with regard to the physiology, pathology, and therapeutical indications of every case, which is not essential; which in fact cannot always be done, and if so, should not be expected, complete in all its details, from the hard working practitioner. When it is attempted, it frequently tends to vitiate the value of the report, for it often becomes necessary to lop off many details in the history of a case in order that it may tally with the explanation. The science and the art of medicine are still to some extent separate. They begin at opposite points from whence they approx-

imate each other. In some instances they coalesce, then perfection is attained; but it cannot be denied that a breach still exists in numerous points, between them, yet to be filled; and that too, by just such facts as come within the range of observation of the unbiassed practitioner. Here then is his most appropriate field of labour; let him, therefore, furnish us perfect daguerreotypes of his cases, and leave explanations to the further progress of science, to which he may eminently contribute.

Every man can, in this way, contribute something, and every man, who makes the practice his calling for life, has a deep and abiding interest in the whole question. Medicine is not only misconceived by the great mass, but misrepresented by an interested few, and it is only in this way by advancing its character as a science, that we are to hope for that position to which the grandeur of its pursuit entitles us.

It is too much the fashion to blame the schools for our wrongs and deficiencies, for we believe that individual members as well as the teachers have duties to perform towards the maintainance of the dignity and the furtherance of the usefulness of our noble profession.

We would urge this exercise of faithfully recording daily observations for publication, particularly on the young practitioner. It serves to point observation, and to establish habits of reflection, which if they accomplish nothing more, tend to preserve against self reproach in unfortunate cases; an influence not to be undervalued in a life so full of trying experiences as is that of a physician. But as has been indicated, every member has it in his power to affect a nobler work. It has been aptly remarked that the medical science constitutes the diagonal brace, holding together the whole framework of the social system, and we would like to see such a spirit diffused abroad, that each member would feel called upon to drive home himself an additional nail serving to increase its strength and to perpetuate its power.

Something of the old cavalier spirit still lingers in our good old dominion. In no way is this more indicated than in the respect of her people for the medical profession, compared with that exhibited for it in other quarters. We would encourage this spirit, and aid in the work of showing ourselves worthy of this confidence. It is due that we should work for it at home—establish a home literature and local institutions. We present ourselves as humble claimants for this great distinction, and respectfully solicit the aid of our brethren.

'Twas Christmas Eve, and the dark shadows of approaching night were gathering around us, as we sat in our little sanctum and yielded ourselves to the associations and influences of the season; the ghosts of the fast departing year; the unborn events of the future; the memories now sad, now joyous; the anticipations of coming success, or it may be of coming failure, all passed rapidly through the mind. Thus buried in contemplation, we were suddenly surprised to find ourselves not alone. Standing before us, we beheld the oddest figure that ever the eyes rested on. His *tout ensemble* was to be compared to some scare crow of the departed summer, upon whose uncouth form the snows of early winter rested; his face so cold and blue; his nose, a huge and gnarled icicle. From early childhood we had heard his name, and oftentimes would creep under the bed clothes and lay with beating trembling heart to watch for him in his perilous descent, but now, for the first time, we beheld the guardian spirit of the season,—old Santa Claus himself.

We silently gazed at this notable old worthy, whose fame covers all the land, and as we thought of the Christmas stocking so plentifully filled by his bountiful hand, and of the many happy mornings when we made fierce havoc with its contents, our heart warmed to the old fellow, when lo! he vanished, leaving at our feet a huge package—his Christmas box.

But little time was lost in prying into the mysteries of this unexpected gift, and with eager eyes and impatient hands we commenced our examination, and first we seized upon a letter addressed to the "Editors of the Virginia Medical and Surgical Journal." What a precious letter it was; from a dear friend, and filled with all those kind words of encouragement and advice which only a friend can offer. It bade us persevere in our labours; it warned us not to sacrifice the noble object in view to personal or selfish ends. It pointed out the responsibilities of the position, and offered sweet words of comfort and hope. Kind friend, we will not forget those words; with a rude and unpracticed pen we record our thanks, and hope to deserve those affectionate flatteries.

But what is this? a purse, and filled to pursy bigness, and as we emptied its contents, bank notes of every grade fell upon the floor, whilst written in large letters were these astounding words: *Delinquent Subscriptions.* Oh! Venerable Saint, no power less than yours could have accomplished this task. What happiness was ours. Kind words do

much—but they will not pay the printer; no learned society, venerable for age and scientific fame, ever offers to pay our debts; but now, we need no help. Our own good patrons, with generous and thoughtful hearts, have come to the rescue, and they for whom we have earnestly labored, have not, at this appropriate season, been unmindful of us.

Our prize though rich is not yet exhausted. We behold a package neatly tied, and see with delight the varied headings of the manuscripts within,—Reports of Cases from our country friends; here a theory; there an operation, and all worthy of praise. Our noble profession is at last throwing off its apathy and is coming up to its work, and the same Virginia blood which tells every where else, is shewing itself in the ranks of science. The same proud spirit which dares to be first in the senate, or on the battle field, will no longer consent to be second in the noble field of medicine. We mean to think for ourselves and write for ourselves. We intend to educate our own students, and perform our own operations. Yes, now we know that our day of vassalage is over.

Once more we search our precious treasure, and last, though not least, is seen a list of—*New Subscribers.* Oh! Santa Claus, it is too much. The best men in the state are there; old North Carolina is well represented, and even from the south and far west have our friends rallied in support of the cause, and as their subscriptions, *pre paid*, fall around us "like autumn leaves in Vallambrosa," we start to our feet to give one loud hurrah:—

The still, cold room,—the darkness of the night,—alas!—"'Tis all but a dream!"

Medical Prescribing through the Newspapers.

The newspaper is the worst of all mediums for prescribing physic. We are suprised that medical men should not see the perfect absurdity of letting patients into their consultations. Surely a man who can put "M. D." or "M. R. C. S." after his name, should know that a knowledge of drugs is a very small part of the physician's qualifications. A book knowledge of the stated symptoms, indeed, together with therapeutics, does not form the half of what the medical man must know. It is the power of discrim-

inating similar symptoms that is the true diagnosis of diseases; the striking out, by a clearheaded inventive activity, an equation of the sum of all the symptoms, in conjunction with the patient's constitution and circumstances, that suggests the treatment. But this demands practised observation, habitual discrimination, and expertness, so to speak, in the algebra of medicine. There is no universal suffrage in medical government.

It is indiscreet even for medical men to discuss their own first ideas in the unprofessional public journals. A most respectable physician has been prescribing castor oil for cholera, with an apparent success, but in a very limited experience. Several others copy him; and at last the Board of Health puts the prescription to a more rigid test. Out of 89 cases, the remedy proved undecided in six still under treatment, successful in 15, fatal in 68. Was not the rash adoption of the drug the direct result of newspaper consultation? Does its consequence not amount to something like manslaughter? If, in this formal inquiry, some portion of the sixty-eight patients died for their country's good, there have been others who have died for the curiosity—it was little better—of the gentlemen who adopted as a suggestion that which ought only to have been a question. Have not the sixty-eight and their companions in the grave some claim for damages upon those medical men who have used them as "corpora" for experiment? *Spectator.*

Female Physicians.

A lady suffers from a headache, the female physician is called in, and prescribes a new bonnet. Another female doctor finds her patient dying to go to the seaside. The husband might as well write and take the lodgings instantly; the doctor will be sure to order it.

Prescriptions will be made up of new dresses, bonnets, boxes at the opera, broughams, a party now and then, increased allowances for housekeeping, trips out of town, and the thousand and one other little whims which ladies are constantly "dying" to be indulged in.

The doctors will declare late hours on the husband's part most dangerous; order them, as they prize their health, to leave off dining at their clubs; tell them that latch keys are undermining his constitution; that cold mutton once a week on washing days is highly beneficial to the system; and as for smoking in the drawing-room, or bringing men home unexpectedly to dinner—they would not answer for their lives a single day unless they give up such unwholesome practices.

Women have got already sufficient means of mastering us. Let them have doctors of their own sex to assist them, and the husband's case will be indeed a hard one.

"Perhaps, after all, there is no great absurdity in the notion of female physicians. All physicians except those who practice gratuitously, may be designated by the word female spelt with another *e*; and there are no a few of whom that is all that can be said. If the head of woman is not calculated for the formation of a diagnosis, she can at least shake it in a difficult case, as effectually as a man can; and having a softer and more musical voice than the masculine, she is better qualified than the most men are for that large part of medical practice which consists in whispering comfort to invalids."—*Punch.*

VARIETIES.

PROFESSOR LALLEMAND.—We have inadvertently omitted to chronicle the loss which science has sustained in the death of Francoise Lallemand, who succumbed after a long and cruel malady, on the 23d of last July, at Marseilles, at the age of 65. Lallemand was a member of the French Institute, and honorary professor of surgery at Montpellier; he was moreover a most skillful practitioner, a sagacious observer, a philosophical and fascinating writer. His work on *seminal losses* has been translated into almost every modern language. During the last few years, he had retired from the active duties of his profession, but followed assiduously the labours of the Institute and Surgical Society. He left a legacy of 50,000 francs to the Institute for the encouragement of researches on the nervous system.

A French journal publishes the following singular statistical statement, to illustrate the terrible havoc which the scientific Germans are making among the lower orders of animals, with their vivisections and mutilations:

"It is estimated, by calculations made with the greatest possible accuracy, that the number of animals sacrificed to science in Vienna, during 1850-'51 '52, was about 56,000, viz: dogs, 26,000; cats and rabbits, 25,000; larger mammalia, 5000. Many of these animals were opened in order to further the researches in regard to entozoa which have recently excited so much attention."

DR. SAMUEL PARKMAN, a surgeon of some distinction, attached to the Massachusetts General Hospital, died at his residence in Boston, on December 16th, of typhoid fever.

Doctor Warren and Mrs. Inchbald.—The elder of the two celebrated physicians of that name, father and son, Dr. Warren, seems to have been a model of his class. He was no formalist, but impressed and interested his patients with

the most sterling qualities, both professional and personal, and had the art (a very great and important art in a physician) of entertaining them, and keeping up their spirits. We have heard it said, on the best of all authorities on such a point—that of an amiable and intelligent woman—that the "finest eyes in the world" were hereditary in the Warrens; so that, under all the circumstances, the reader will not wonder to be told that Mrs. Inchbald, one of his patients, was secretly in love with him, and would pace Sackville street after dark purely to have the pleasure of seeing the light in his window. A pleasant answer is recorded of him to Lady Spencer. Her ladyship questioned whether the minds of physicians must not be frequently embittered by the reflection that a different mode of treatment might have saved the lives of their patients? Dr. Warren thought otherwise. "The balance between satisfaction and remorse must," he continued, "be greatly in favor of satisfaction," and as an instance of it, he hoped he should have the pleasure of curing her ladyship "forty times before he killed her."—*Dickens' Household Words.*

Longevity in Great Britain and Elsewhere.—The British census, just published, gives several remarkable instances of longevity. Thos. Parr lived 152 years and 9 months; Henry Jenkins 169 years. But still more remarkable, according to the Paris Register of St. Leonard's, Shoreditch, Thos. Carn died January 28, 1588, aged 207 years. From 1759 to 1780, 48 persons died, the youngest of whom was 130, and the eldest 175. In 1797 a mulatto died in Frederickton, North America, said to be 180. According to Kirby's Wonderful and Eccentric Magazine, there were two Hungarians in the seventeenth century who lived to a remarkable age—John Rovel and his wife. John reached his 172d year, and Sarah her 184th. In Great Britain, more than half a million of the inhabitants, namely: 586,030, have passed the barrier of "threescore years and ten;" more than a hundred and twenty-nine thousand have passed the Psalmist's limit of fourscore years; and 100,000 the years which the last of Plato's climacteric square numbers expressed, (9 times 9—81;) nearly ten thousand (9847) have lived 90 years or more; a band of 2038 aged pilgrims have been wandering ninety-five years and more on the unended journey; and 319 say that they have witnessed more than a hundred revolutions of the seasons.

The municipal authorities of Selma, Ala. alarmed at the ravages of yellow fever in other southern towns, and apprehensive of a second visitation of that disease, have declared quarantine. All conveyances are examined before they reach the city. Dr. Patrick H. Cabell, formerly of Virginia, is appointed quarantine officer; a dangerous and honourable post, for the physician who filled it last year lost his life in the discharge of his functions.

A Prussian antiquarian, H. Brugsch, has discovered among the records of Sesostris the Great, a complete Egyptian Pharmacopœia! We hope before long to furnish our subscribers with recipes dated at Memphis, 1349 years before the Christian era. It has been said very truly that our profession is not an institution of yesterday.

Dr. John A. Swett, Professor of the Practice of Medicine in the medical department of the University of the city of New York, died on the 28th of September last, of Bright's disease.

Dr. Swett had acquired great reputation and success as a physician and lecturer. He was associated for two years with Dr. John Watson in editing the New York Journal of Medicine and Surgery, and was the author of a "Treatise on the Diseases of the Chest," which was received by the profession with great favor.

Mons. Piorry a Poet.—The distinguished author of mediate auscultation, and the author of a new medical nomenclature, nine volumes 8vo. has just published a poem on God, the Soul and Nature, in six cantos. The apparition of such a poem by a clinical professor of the faculty on the same day that he read a memoir on the cure of phthisis by inhaling the vapour of iodine, has produced no small astonishment in the medical circles of Paris.—*Ed. Med. Monthly.*

His Majesty King James the First is said to have declared that the itch was a disease only fit for kings, the scratching being so exquisite an enjoyment.

Sydenham on Corns.—This illustrious physician once remarked that if one man was to spend his lifetime in finding out a certain cure for corns, he would deserve well of posterity and might be said sufficiently to have served his generation.—*Wilson on the Skin.*

Infants' Hospital.—Four years since, Madame Otto Goldschmidt—then Jenny Lind—gave her gratuitous services at two musical entertainments in Norwich, the proceeds of which were to be applied to charitable purposes. The fame of the celebrated vocalist attracted immense audiences, and a clear surplus of 1200*l.* remained after payment of all expenses. The late Bishop of Norwich, Dr. Stanley, strongly advocated a plan for establishing baths and wash-houses with the money; but, after considerable discussion, a hint, thrown out first, we believe, in *Household words*, that the diseases and necessities of "little children" were wholly uncared for throughout the country, has been acted upon, and a building engaged, which from the first of January next will be devoted exclusively to the alleviation of infantine sufferings.

UNIVERSITY OF PENNSYLVANIA,
MEDICAL DEPARTMENT,
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The Lectures will commence on Monday, October 9, and terminate in the middle of March ensuing.

Theory and Practice of Medicine,	By GEORGE B. WOOD, M. D.
Anatomy,	JOSEPH LEIDY, M. D.
Materia Medica and Pharmacy,	JOSEPH CARSON, M. D.
Chemistry,	ROBERT E. ROGERS, M. D.
Surgery,	WILLIAM GIBSON, M. D.
Obstetrics and the Diseases of Women and Children,	HUGH L. HODGE, M. D.
Institutes of Medicine,	SAMUEL JACKSON, M. D.

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Clinical Instruction in Medicine and in Surgery by the Professors of the Medical Faculty, assisted by W. W. GERHARD, M. D.

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Practical Anatomy,	10
Graduating Fee,	30

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SESSION OF 1854-55.
COMMENCES OCTOBER 9, 1854.

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J. L. TYSON, M. D.,	" Materia Medica, &c.
ISAAC S. PENNYPACKER, M. D.,	" Theory and Practice of Medicine.
HENRY HARTSHORNE, M. D.,	" Institutes of Medicine.
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PRIZE ESSAY.

AT A MEETING OF THE MEDICAL SOCIETY OF VIRGINIA, Held in April 1853, the following resolutions were adopted:

1. That a medal or some suitable testimonial not to exceed fifty dollars in value, be awarded annually by the society, for the best Essay upon some Medical Subject.

2. That a committee of three be appointed to examine all Essays that may be offered, and select the one worthy of such medal or testimonial.

At a meeting of the society, held in April 1854, on motion of Dr. Atkinson, it was resolved that the subject of the next Prize Essay should be *Pneumonia*, and the president of the society was directed to appoint a committee of three to award the premium.

In order to carry out the above resolutions, the president of the society has appointed the undersigned a committee to examine such Essays as may be offered on the subject of pneumonia. All communications must be addressed to the chairman of the committee. They must be accompanied by a sealed note, containing the name of the writer, and bearing upon its face a motto corresponding to the one prefixed to the Essay.

Unsuccessful Essays will be returned, should the writers so desire. No Essay will be received after the first of March 1855.

All communications forwarded by mail must be pre-paid.

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By CHARLES BELL GIBSON, M. D.

Anatomy,
By CARTER P. JOHNSON, M. D.

Theory and Practice of Medicine,
By DAVID H. TUCKER, M. D.

Chemistry and Pharmacy,
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THE

VIRGINIA

MEDICAL AND SURGICAL JOURNAL.

FEBRUARY 1855.

ART. I.—*The Results of Twenty-four Operations for Lithotomy.* By P. C. SPENCER, M. D., Petersburg, Virginia.

In my report of the "Results of Fifteen Operations for Lithotomy," fifteen cases were reported in the "American Journal of Medical Sciences" originally, and copied in the Stethoscope, Vol. 1st, pages 157 to 161.

The sixteenth operation was performed March 3rd, 1850, and followed the report of the fifteen cases.

We have uniformly operated with the same instrument, viz: the Lithotome Caché, or the bilateral improved instrument of Baron Dupuytren.

At present, my design is to report the eight cases which have been operated on since the sixteenth case, and their results.

Of the sixteen cases reported, 9 were whites, all males, 3 boys, 4 nearly grown, and 2 over 21 years of age. The number of blacks was 7, 5 boys and 2 men over 21 years of age.

Of the nine cases now to be reported, 6 were whites, 5 boys, and 1 man 64 years of age; three were blacks, 2 boys and 1 man, 61 years old.

Case XVII. Master J. T. Deanes of N. Carolina, aged 11 years, was operated on February 20th, 1852. Drs. White, Michie, and Couch were present. We removed a calculus weighing two hundred and fifty grains. We were gratified to find him passing his urine naturally on the ninth day. March 17th, he returned home and has enjoyed good health since.

Case XVIII. Mast. Geo. Ford, 8 years of age, a son of Mr. R. H. Ford of this city, was operated on March 19th, 1852. Drs. Branch, Briggs and Couch assisted. The calculus weighed one hundred and ninety-three grains. April 6th his urine flowed naturally. From this period his health improved rapidly.

Case XIX. Gen. Thomas W. Norman of N. Carolina, 64 years of age, came to this City the 30th of March 1852, in bad general health, and two local diseases of unusual severity to contend with: one a cancerous condition of the side of the face and neck, of considerable extent, which had annoyed him some thirty years or more, and the other, stone in the bladder, as was supposed. February 6th, 1852, I visited him to ascertain his true condition, and introduced the sound, which passed very readily, until the instrument entered the bladder; there I found great difficulty in the sound passing. The stone seemed to have filled up the entire cavity of the bladder; the size was large in the extreme as the result of the operation will show. April 7th, 1852, he was operated on, and our impression from the examination, of the unusual size of the calculus were so strong that all necessary instruments for breaking down the stone were at hand, but contrary to our expectations, we found it easier to crush, than we anticipated. With the large pair of forceps we were able to crush the stone, and then by frequent attempts and considerable time, to accomplish its destruction. After this we were able to empty and cleanse the viscus completely with moderately warm soapsuds. We attempted for some 20 or 30 minutes to place him under the influence of chloroform, æther, or the two combined, but were unable to effect our object. The fragments of the calculus after being cleansed were accurately weighed, and they amounted to the unprecedented weight of six and a half ounces nett. Notwithstanding the unusual length of time that we were engaged in this extremely unpleasant and fatiguing operation, yet we were agreeably astonished to find on the 23rd of April he was passing his urine naturally, for

we were apprehensive that considerable damage had been done the bladder and the surrounding cellular tissue, but to our astonishment and surprise no sloughing or injury of any kind followed the operation. On the 30th of April he returned home in fine spirits, and with the prospect of better health. We are in hopes that our readers will excuse us for intimating that two local diseases existed simultaneously, in different parts of the body, both equally destructive, and both the most horrid afflictions that man is heir to, the one cancer, the other stone, of six times the ordinary size. But he left us in very good general health, and with prospects brighter than they had been for years. As the General requested that some few of his friends should be present, I invited Drs. White, Michie, Rives, Couch, Christian, and Col. Britton to attend.

Case XX. Master M. D. Carroll, 8 years of age, Matoaca, Chesterfield, Virginia, was operated on April 27th, 1852. The weight of the calculus was 540 grains. Present Drs. White, Rives, Couch, Dudley, Woodson, and Atkinson. May 10th, he urinated naturally, and on the 15th returned home.

Case XXI. Boy Robert, 10 years old, the property of Mr. A. Bailey, Cabin Point, Virginia. We operated on him May 26th, 1852. The weight of the calculus was 346 grains. Present Drs. White, Rives, Michie, Couch, and several others. June 6th, he urinated naturally, and on the 8th returned home. It will be perceived that we have operated five times in ninety-five days, and nothing unpleasant happened to either of the cases.

Case XXII. Trial Williamson, (free man,) aged 61 years, N. C. On his arrival in the city he was in tolerable health; the local affection the only one of much moment to him. After some preparatory treatment he was operated on, the 11th of November 1852. Having ascertained that the stone was a very large one, we made the cut the full size of the instrument, so as to remove it readily, should it be impossible to break it down. The weight of the calculus was 2350 grains, hard and very compact, and about the size of a large turkey's egg; it was impossible to crush it; consequently it was taken away whole with the exception of some little scaling of one side; requiring a good deal of force and manipulation to remove it; and as a matter of course, a considerable destruction of the cellular tissue and surroun-

ding parts ensued. The above is the largest stone that we have ever seen to the best of our recollection. The one from General Norman was much larger, but we were compelled to break it to pieces, before we were able to remove it. Drs. White, Branch, Woodson, and Dudley were present. He remained in the city for two months, and during the whole of that time, his urine passed through the opening made to extract the calculus. We have heard from him once since, and the largest proportion of his urine continued to flow through the artificial channel. Our impression is, that his urine will continue to pass through this opening for life, as the destruction of the cellular tissue was considerable, and the exhaustion of his vital energies from premature old age was very great.

Case XXIII. Master M. D. Carroll, 9 years old, Matoaca, Chesterfield, Va., May 14th, 1853, was operated on, this being the second operation upon this youth in the course of thirteen months. The weight of the calculus was 140 grains. Present Drs. Branch, Noel and Dudley. June 10th, he returned home in common health, with the exception that occasionally a few drops of urine would pass through the opening. About the thirteenth day his urine began to pass naturally.

Case XXIV. Master Geo. E. Smith, aged 9 years, the son of Mr. B. E. Smith of Lunenburg, Va., October 18th, 1853, was operated on. The weight of the calculus was 480 grains. Present Drs. White, Michie, Branch, Steel and Smith. November the 30th he urinated naturally. December 7th he returned home, some little sloughing took place, but not enough to produce any disagreeable result.

RECAPITULATION TABLE

*Of the Twenty-four Operations for Lithotomy, Performed by Dr. Spencer, with Their Results.**

No.	Age.	Color.	Urine passed per Urethram.	Results.
I.	4	Black,	-	Died in 12 hours.
II.	17	White,	-	Died on 14th day.
III.	35	Black,	8th day,	Discharged cured on the 30th day
IV.	18	Black,	15th "	" " 40th "
V.	7	White,	5th "	" " 25th "
VI.	9	White,	-	" " 40th "
VII.	5	Black,	10th "	" " 30th "
VIII.	4	White,	8th "	" " 30th "
IX.	18	White,		
X.	27	White,	10th "	" " 25th "
XI.	4	White,	3d "	" " 19th "
XII.	4	Black,	5th "	" " 25th "
XIII.	7	White,	10th "	" " 30th "
XIV.	4	Black,	4th "	" " 22d "
XV.	28	White,	11th "	
XVI.	17	Black,	-	" " 84th "
XVII.	11	White,	8th "	" " 25th "
XVIII.	8	White,	17th "	
XIX.	64	White,	15th "	" " 23d "
XX.	8	White,	13th "	" " 18th "
XXI.	10	Black,	10th "	" " 15th "
XXII.	61	Black,		
XXIII.	9	White,	30th "	
XXIV.	9	White,	39th "	" " 50th "

* Our readers will perceive that in twenty-four operations, Dr. Spencer lost two; a proportion of 1 in 12. This result compares very favorably with the estimates of the relative mortality in lithotomy in England, France, and America. Mr. Coulson estimates that the fatality of lithotomy in England may be stated as 1 in 8.37, whilst M. Civiale in France, places it as high as 1 in 5.94. The records of the Pennsylvania hospital show that in 83 operations for lithotomy, 72 were cured, 10 died and 1 was relieved. This proportion very nearly agrees with Mr. Coulson's estimates.—Ed. note.

ART. II.—*Case of an Extra Uterine Fœtus, Retained Forty Years.* Reported by JOHN A. CUNNINGHAM, M. D., Richmond, Virginia.

Among the many remarkable cases of extra uterine pregnancy found scattered throughout the various works on obstetrics, and which have been nowhere so well grouped, as in "Dr. Campbell's memoir on extra uterine pregnancy," published in Edinburgh, 1840, we have never met with any better deserving to be placed on record than the one occurring in our practice during the past year, a short description of which we here give.

During the spring of 1853, we were desired to visit an old negro woman, who had been the cook for one of the largest families in this city for probably fifty years, and whose office during that long period of time had certainly been no sinecure. After serving in this capacity as long as she was able to perform its duties, she was now at the advanced age of eighty or eighty-five, a superannuated dependent on her master. As is common with negroes, she did not know precisely how old she was, but we think that the estimate of her age we have made, is correct. Although her mind was somewhat impaired, yet her health, which had always been remarkably good, had only given way in the last few months; and it was for the purpose of rendering her professional aid that we were asked to see her.

We found the old woman's general health quite good, although she was somewhat enfeebled by a long continued pain in the loins, accompanied by great irritability of the rectum and anus, with a constant tendency to stool, and she complained greatly of the tenesmus and straining which she had suffered with for some time.

There were no reasons to lead us to suspect what afterwards turned out to be the true condition of things, and we therefore treated her for the rectal irritation, and in the usual way, but without giving her any relief. The discharges from the bowels became offensive and filled with purulent matter, and at last we were astonished to hear one morning from her nurse, that the old woman had been for some days passing bones of different sizes and shapes, none of which she had preserved. She was at once instructed to keep whatever substances of that sort she might evacuate from the rectum; and in a day or two she brought us quite a number of bones, evidently those of a fœtus, completely denuded of flesh, and surrounded by a slimy and purulent material. These bones

which were collected for some time, and some of which we now have, are mostly the phalanges of the fingers and toes; others are evidently the heads of the long bones imperfectly ossified, and some apparently portions of the pelvis and other of the flat bones. This poor old creature still lives, but is gradually sinking under the weight of her infirmities, and continues to discharge at times, bones of different shapes, but all evidently belonging to the fœtal skeleton.

We enquired of the patient whether she had ever thought herself pregnant and afterwards believed herself mistaken, but so old was she, and with a mind so impaired, that she remembered nothing which could be made to bear upon the point. The only fact of interest was elicited from a fellow servant who had lived with her many years, and who informed us that the cook had often complained of having a tumour in her belly which troubled her. This tumour upon examination we found had disappeared. We ascertained however from her owner that she had been the mother of several children.

We think then it may be stated beyond dispute that in this woman we had a case of extra uterine pregnancy, which after remaining in abeyance not less than *forty years*, and interfering but little, if at all, with her general health, had at last been discharged by ulceration of the sac which contained it, forming a fistulous opening into the rectum, and giving rise to all the symptoms to which we have alluded.

[Dr. Campbell's essay, alluded to above, gives some cases shewing the great length of time that a fœtus may remain in the abdomen, producing comparatively but little distress, which are equally remarkable with the one just reported. He has collected from various sources, seventy-five cases of extra uterine pregnancy, where the fœtus was retained for periods varying from three months to fifty years; one case to fifty-two years; one to fifty-five and one to fifty-six years.

Denman in his 13th plate delineates an extra uterine fœtus that had been conceived thirty-two years before the death of the mother; and in the Hist. d l'Academie Royale des Sciences, an instance is recorded of a woman who conceived at forty-six and lived until ninety-four, when an ossified fœtus was found in her abdomen, consequently she must have carried it forty-eight years.—Ed.]

ART. III.—*Case of Vaccina and Variola Simultaneously Running their Course and Modifying each other.* By J. N. SCHOOLFIELD, M. D., Late Physician to the Marine Hospital, Norfolk.

This case probably possesses interest enough to make its publication desirable.

Russell Johnson, aged 20, was admitted into the marine hospital, near Norfolk, while under our charge, on the 12th day of January 1851, with gonorrhœa. The small-pox prevailing in the house at that time, and he not having been previously vaccinated, some vaccine matter was introduced into his arm, on the next day. Up to the 21st, eight days after the operation had been performed, at which time he was discharged from our sick list, there was no sign of the vaccination proving successful.

On the first of February, he was re-admitted, having about his face a variolous eruption. On examining his arm, we found the vaccine pustule begining to fill, and having such an appearance as we would look for on the seventh day, though eighteen days had elapsed since the introduction of the matter.

February 2d. The pustule presents the characteristic marks of the eighth day. The variolous eruption is in its third. It is very thick about the face, but scattering about the arms; no fever.

3d. Pustule fully developed. Areola perfect. The small-pox pustules very irregular. Some are filling while others are just making their appearance. Constitutional symptoms slight.

4th. Pustule distended with matter. The areola has disappeared. The eruption about the face very thick, but irregular in its development. Some of the pustules on the face are dessicating, while others on the arm are only to be felt beneath the skin. Face much swollen. Ptyalism, and some fever.

5th. Pustule beginning to scab; eleven days having elapsed since it showed itself. The small-pox eruption, though only in its sixth day, is drying up on the face, in patches; that on the breast and arms, in some places is but beginning to fill, whilst in others, it is just making its appearance; fever, sore thoat and much ptyalism.

6th. Pustule as yesterday. Eruption maturating rapidly over the face, and filling on the breast and arms.

7th. Pustule not yet dessicated. Eruption as on yesterday.

8th. Maturation going on rapidly. The face is entirely scabbed over, though the eruption is only in its ninth day.

9th. Pustules on the arms and legs shrinking. From this day the symptoms gradually improved and the patient recovered.

In this case there are several points deserving attention. The first is, that in the same individual we have three specific diseases existing at the same time—gonorrhœa, vaccina and variola. The second fact deserving notice, is the length of time which elapsed after his vaccination, before the system gave evidence of its presence. The operation was performed on the 13th of January, and yet the vaccine pustule had all the appearances of the seventh day, on the 1st of February, eighteen days after the introduction of the matter. It is also worthy of remark, that the small-pox eruption was cut short in its course—that maturation over the face anticipated its regular course three or four days, and that the eruption on the legs and arms aborted without filling.

We have no doubt but that the case was materially benefited by the vaccination. From the quantity of the eruption, we should have expected much constitutional disturbance, but such was not the case. He only had slight fever one or two days, and at no time suffered with his head or back.

ART. IV.—*On Vaginitis.* By J. T. HICKS, M. D., Granville County, North Carolina.

That vaginitis, accompanied with a leucorrhœal discharge, is a very intractable disease, especially in married women, is a fact well known to the medical profession. It sometimes occurs in women who appear to enjoy good health in other respects, and is caused no doubt, frequently by excessive venereal indulgence. That this acts as an exciting cause in cases originating from other causes is also a well known medical fact, and in this consists one of the great barriers to the accomplishment of a radical cure; especially in chronic vaginitis—I mean the great diffi-

culty of getting a woman to live "absque marito." Chronic vaginitis or common leucorrhœa during pregnancy, can generally be readily relieved by mild astringent injections, and where the patient, as is frequently the case, is anemic, by the addition of vegetable or mineral tonics to be administered as in common cases of anemia. In cases of acute vaginitis, where the patient is robust, or even of good constitution, it may be necessary to use antiphlogistic remedies even to the lancet. But in chronic, or even sub-acute cases, where the patient's constitution is delicate, or very much debilitated from the excessive discharge, no physician would feel himself justifiable in resorting to antiphlogistic remedies. Such being the general opinion and practice of the profession, I beg leave to report one or two cases, in which I had to abandon the common practice in such cases, and resort to a different and opposite plan of treatment.

Case I. Mrs. L. æt. about 27 or 28 years, of tolerably good constitution, about two months previous to her second pregnancy, was taken with leucorrhœa. Her health being rather delicate, I prescribed mineral tonics with astringent injections into the vagina. She continued under this treatment for several weeks, at the end of which time she was worse than when I first saw her. Her bowels were constipated, which I relieved with purgative pills. As I thought I had persevered long enough without any amendment, I concluded to change my plan of treatment and resort to an opposite course. About this time I ascertained from her husband, that she was troubled with difficult micturition. She also complained of severe pain in the lumbar region, and a feeling of weight in the lower portion of the abdomen; my patient also informed me now, that her greatest suffering was just before the commencement of the vaginal discharge, which was generally very profuse, followed by complete temporary relief. I also ascertained that just before the appearance of the leucorrhœal discharge, there was great irritation and swelling of the genital organs. These last mentioned symptoms did not make their appearance until after the commencement of pregnancy; and which through a sense of false modesty she had kept concealed for some time. To relieve the local irritation and swelling, I ordered lotions of an infusion of the ulmus fulva, and also of a solution of acetate of lead and laudanum. The use of the syringe I discontinued, as its introduction caused great pain. I prescribed internally a solution of nitrate of potash, tartrate of antimony and potash and sulphate of morphia, as follows: ℞. *Nitr. pot.* ℥*i*; *Tartr. ani. and pot. grs. ij.*; *Sulph. morph. gr. i*; *Aqua* O*j*; of which I ordered a tablespoonful to be taken four times a day, in half a pint of water, to prevent gastric irritation. From this prescription I found the happiest results. The difficult micturition, the irritation and congestion of the genital organs were relieved, and the leucorrhœa also was much impro-

ved without using any astringent injection. The pain in the loins and lower portion of the back, and the feeling of weight and a bearing down sensation when in an erect position, also ceased until the latter period of pregnancy. During the last months of utero gestation she was troubled with acidity of stomach, for which I prescribed magnesia with complete relief. For the bearing down sensation, and feeling of weight in the lower portion of the abdomen, I ordered an abdominal supporter, with straps passing over the shoulders. This she wore from about the seventh month of pregnancy, until her confinement, with considerable relief. I attended her during her confinement, and never have I seen in my practice a more natural and easy labour. Should the above prescription produce any unpleasant symptoms, it should be given in smaller doses, or the proportion of the ingredients changed, so as to suit particular idiosyncrasies.

Another case of the same kind, though much milder than the preceding, came under my care shortly afterwards. It is unnecessary to give all the particulars of the case. Suffice it to say that I treated it much as I did the first one, and with very decided beneficial results. I attended her also during labour, which was natural and easy. I should have mentioned that in neither of the above cases was there any general excitement of the system.

I wish it distinctly understood that I claim nothing original in the above mentioned treatment. I dare say other physicians have treated similar cases after the same manner. Yet the books direct us to pursue an opposite course—which was the only motive prompting me to write out my observations, thinking that they might possibly be of service to some new beginner who was following the books as his guide. Churchill, in his work on diseases of females, page 67, says, in giving the treatment of acute vaginitis, "In some cases I have tried small doses of tartar emetic with apparent benefit." He also advises blood letting in plethoric patients where the inflammation is intense. But in the chronic form we hear nothing of depletory or antiphlogistic measures save in a few rare cases, and then cupping the loins, or leeches to the vulva are recommended. On page 69 the same author says, "If the patient be weakly or cachectic, tonics either vegetable or mineral ought to be given." Dr. Locock, Cyclop. of Pract. Med. art. Leucorrhœa, says, "In the leucorrhœa from constitutional debility or disordered health, the usual remedies for restoring the vigor of the frame are required. Tonics of every kind are admissible, according to the circumstances of the case; but those containing or combined with the mineral acids have most efficacy." Several other remedies are mentioned by authors, such as bal-

sam copaiba, cubebs, compound tinct. of benzoin, tinct. of cantharides, &c. &c. As injections, decoction of oak bark, alum, sulphate of zinc, and nitrate of silver, all may prove highly useful in a great many instances. I do not wish to decry any remedy laid down in the books for the cure of this very intractable disease. It is not my intention to attempt a revolution in the treatment of vaginitis, a disease which admits of very different and opposite modes of practice in different patients. My main object has been to report to the profession the history of one or two anomalous cases which failed to succumb to the usual treatment, but which yielded immediately to an opposite plan. In conclusion, permit me to express the opinion that we oftentimes administer stimulants and tonics for debility and anemia, when really the debility is owing to irritation and congestion of some particular organ or organs of the economy, which an opposite method of practice would relieve.

ART. V.—*Obstipation of the Bowels Continuing Thirteen Days.* By A. S. McRAE, M. D., Chesterfield county, Va.

On the morning of the 27th July last, I was called to Mrs. B., aged about 65. I found her complaining only of slight abdominal pain, referred particularly to the region of the colon. Upon inquiring into the history of her case, I learned that for several years past she had been subject to habitual constipation, associated with hepatic derangement. When I first saw her, her bowels had been entirely inactive for four or five days. She had taken a large dose of Wright's pills, which had produced no effect. Having directed a dose of castor oil and turpentine to be administered at once, and warm fomentations to be made to the abdomen, I left my patient with the promise that I would return in a few hours. Upon my return I found Dr. Sydenham Walke, who had been sent for the night before, had arrived. We treated the patient together during the remainder of her illness. The first prescription I made having proved entirely ineffectual, we directed large quantities of warm water to be injected into the bowels, which was frequently done, but without effect. Nearly a teaspoonful of chloroform was then

given, with the hope that it would afford relief by its well known relaxing influence. Slight drowsiness, associated with nausea were the only effects which resulted from the exhibition of this dose. Having kept no memoranda of the treatment of this case, it is impossible to be precise upon this point. Suffice it to say, however, that we continued our unabated efforts to overcome this obstinate condition of things until the 2d day of August, first trying one remedy, and when it failed trying another; all, however, without the slightest success. At this period stercoraceous vomiting supervened. Consultation with Dr. S. A. Patteson being desired, he was sent for, but was unable to attend until the next day. After consultation with Dr. P., we determined to give small doses of salts and senna every three or four hours. There being considerable tympanitis, lime water was also administered. This treatment was continued throughout the whole of the 3d day of August, but owing to the excessive irritability of the stomach and frequent vomiting, but small portions of these remedies could be retained, and they were accordingly discontinued at night. Large quantities of warm water were again injected into the bowels; and, on the night of the 4th August, when there scarcely seemed any ground for hope, a large amount of hardened fæces was discharged, which was soon followed by copious dejections, having, of course, an exceedingly offensive odour. It is not improbable that some credit is due in this case to the combination of salts and senna, small portions of which were doubtless retained, and which may have served to loosen and break down the hardened fœcal mass, and thus to have aided the injections.

My only object in furnishing a history of this case for publication, is to encourage those of my professional brethren, who may have, for the first time, to meet cases of this sort, not to abandon treatment altogether; but, even under what may appear to be the most hopeless state of things, to persevere in their efforts for the relief of the patient as long as life continues.

LECTURES.

I. *Lectures on Fever.* By WILLIAM STOKES, M. D., Regius Professor in the University of Dublin.

LECTURE IX.

We were speaking, at the termination of our last lecture, upon the connexion between fever and tubercular deposits; and I showed you, that, in certain cases, we had positive proof of the deposition of tubercle in the lung, where the secondary bronchial affection of fever was distinctly developed. In one case a great quantity of tubercular matter was manifestly secreted during the existence of the typhus state itself, and in the first attack of the disease, the patient having been previously in the best health. In another set of cases there was reason to believe that a small quantity of tubercular matter had been secreted; and, although neither the symptoms nor signs of the disease ever led to a suspicion of its existence, yet the expectoration of calculi at periods of different duration after the convalescence, furnished a stron proof that the lesion had actually occurred. And, looking at the entire subject, I think it more than probable that, in many cases, even where this proof of the actual deposit of tubercle has not occurred, the patient has gone through the processes of deposition and of cure of a tubercular disease. The cure may be effected either by absorption, or by suppuration at a number of points, so minute as to elude detection by physical means, the signs being lost, or confounded with those of ordinary bronchial disease. I think that this is likely to occur in many cases in which we have a doubtful convalescence, with a quick pulse and a hectic state, in patients who have had typhus, with severe bronchial disease.

How are we to look on this tubercular secretion as a result of the typhous state? Were these patients already subjects of the tubercular diathesis, although no actual deposit had taken place at the time of their being attacked with fever? Or, are we to enumerate tubercular matter as in itself one of the secondary secretions of typhus? I strongly incline to the latter view. This much, at all events, is certain, that, in a large number of cases there were, previous to the attack of contagious typhus, no existing symptoms or physical signs of phthisis, nor did the patients present those constitutional characteristics which indicate a proclivity to tubercle. Tubercular matter, as one of the secondary products of fever, is probably to be looked upon as among the more rare consequences of the disease; for, although we have seen many instances of it, yet, in the great majority of cases of typhus with

bronchial disease, there is no evidence of its having ever occurred. Why it should occur in one case, and not in another, we do not know; but it is very probable that there are great varieties in the nature of the typhous deposit in different patients and in different epidemics. It is not unreasonable to believe that the inconstancy which we observe with respect to the seat, the amount, the periods, and the complications of the secondary diseases of typhus, should be also repeated as to their chemico-pathological characters. And thus one patient may have a secretion or deposit which is not tubercular, while another exhibits this alteration to a greater or less degree. All this, you will see, bears strongly on the question of the specific or non-specific nature of tubercle; and the facts which we have just now been examining seem to point to the conclusion, that the doctrine of tubercle being a purely heterologous product resulting from a specific contamination of the system, is one which we must be cautious in accepting. But there are other circumstances in relation to this matter with which you should be acquainted.

Hitherto we have been dealing with cases in which the tubercular formation seemed to be, as it were, an accident in the chain of typhous phenomena; cases in the majority of which, at all events, the actual amount of the secretion was probably inconsiderable. I spoke, at our last lecture, of one case in which a great quantity of tubercular matter was formed during the existence of a genuine and well-marked typhous fever; but in the instances hitherto under consideration, we may hold that the tubercular deposit was but a superaddition to the ordinary secondary bronchial disease. Let us now inquire whether there is any evidence of the existence of a fever closely allied to, if not identical with, typhus or typhoid fever, and in which the secondary lesion is purely the deposit of tubercle, the tubercular matter and the fever standing in the same relation one to the other as the matter of the small-pox pustule does to the essential disease of variola. I do not pretend to give you any extended information on this point, but the following circumstances are worthy of your careful consideration.

In the epidemic of typhus fever of 1827 and 1828, the two most remarkable circumstances were, the great prevalence of the follicular disease of the intestines, and the liability to relapse. In a good many instances, it was found that the fever in the relapse was of a more severe character than in the first seizure. You may have observed something of the same sort during the present season; for we have had several instances in which, while the first attack only ran a period of from five to eight days, with the comparatively mild symptoms of what is called typhoid fever, the patients, on relapsing, had severe, long-continued, and maculated fever. In some of them, too, the bronchial system, which had escaped during the first illness, was profoundly engaged during the more severe attack. I may observe here, that the difference in the character of the fever during the first and second seizures is one of the many circumstances which make us dissent from the doctrine, that what is called the typhoid fever is really distinct from typhus; for we see short typhoid fever relapsing into well-marked typhus, and

conversely, typhus relapsing into the typhoid form. But this is a digression. It was found that in several instances in which the patients had gone through the first attack of fever, and relapsed, that the relapse presented a group of symptoms very different from those in the primary illness. The fever was much more violent, the sufferings greater, and the local symptoms more numerous and decided. One case I shall never forget. A young woman had gone through the usual primary attack of fever, and recovered satisfactorily. There was nothing either in her previous history, or in the symptoms of her fever, to distinguish this case from that of hundreds that had passed through our wards. After remaining a few days in a state of convalescence, this girl was reported to me as having relapsed. As there was nothing unusual in this, we merely directed the usual expectant and cooling treatment; but on the second or third day of the relapse it was plain that the disease was taking on a new character. The patient had symptoms of local suffering, or irritation, if you will, in all the cavities. The head was hot and painful, and she was delirious; the heart was excited, and the pulse was rapid and wiry; the skin was burning hot, and the general symptoms were those of the most severe ataxic fever, with the greatest agitation and distress.

But I have not yet enumerated all the symptoms of this singular case. We have seen that there were high fever and cerebral excitement; in addition, the patient suffered from unceasing dyspnœa, running into the worst orthopnœa. The countenance was swollen and livid. There was a constant cough, with a scanty bronchitic expectoration, and pain of both sides. Then the symptoms of irritation in the belly were as well-marked. It was greatly swollen, tympanitic, and painful on pressure. The tongue was red, dry, and cracked; the thirst immoderate, and she had frequent diarrhœa. Now observe, that no effort of ours produced the slightest alleviation of any of her symptoms; and under this storm of disease she sank on the seventh day from the commencement of the relapse. We found, on dissection, an almost universal deposit of miliary and granular tubercle. I never saw anything like it before, nor have I ever met anything like it since. The lungs, the liver, the spleen, the uterus, the kidneys, and all the serous membranes, were implicated; and the amount of the deposit, particularly in the lungs, liver, spleen, and arachnoid, was beyond anything that you can imagine. The tubercular deposit was of the same character everywhere. It was the disseminated tubercle, not the infiltrated. In the lungs no one portion was less engaged than another. The little tubercles, some semi-transparent, others white and opaque, were so closely placed that they all but touched one another; yet each was distinct. There was no inosculation, or running of one into the other; nor was there one among these myriads of deposits that showed any appearance of suppuration. The bronchial membrane was of a deep red colour, and the pulmonary structure, which was nowhere hepatised, presented a bright scarlet hue. In the spleen, which was enlarged, the deposits were nearly as abundant as in the lung; a few of them had attained a larger size and a more granular structure. The pericardium, peritonæ-

um, and arachnoid, were all studded as closely as possible with the miliary tubercles.

Now, reflect on this case. Who can doubt that this extraordinary deposit was the result of the second attack? The very quantity of it is sufficient to prove this; for, if we even take the lung, no one would believe that this amount of disease could have existed, either before the first attack, or during the period of convalescence, when there was apyrexia and quiet breathing; and, again, remember that all these deposits were in the same, or very nearly the same degree of development; and, again, that this disease occurred in a patient who had gone through her first fever without any remarkable symptoms, and during an epidemic, when relapse was so frequent as to be considered the rule.

Gentlemen, this might be called a tubercular fever. Call it, however, what you will, it was a fever, with secondary lesion, of a peculiar kind. This change, or local disease, was in one sense anatomical, no doubt, in that there was tangible visible alteration; but it set the anatomical divisions of fever at nought, from the fact of its being universal. The disease was as universal, or as essential, as the parent malady or fever which produced it. Why tubercular matter was produced here in such incredible quantities, and in so short a time, we do not know. Why, in the same epidemic, this patient, in common with many others, suffered in this way, while the great majority of the sick recovered, we cannot tell, any more than why one patient in fever, and in the same epidemic, shall have disease in the mucous glands of his intestine; another, congestion, and typhoid deposit in his lungs; another, an enlargement of his spleen; another, a soft heart; another presenting all these changes combined; and so on, with an endless variety. See how all this points to the doctrine of essentialism in fever, no matter where, or to what amount, or under what complications, the local anatomical changes may be found.

In this case, it is probable that the immediate cause of death was asphyxia, for the lungs were almost completely filled with the deposits; but there was so much local disease of the same kind elsewhere that it is difficult to say how much or how little the local deposit in the lungs acted in causing death, especially when we recollect that the fever alone, from its very virulence and malignity, might have destroyed the patient. Had there been a smaller amount of tubercle in the lungs, she might have thrown off the fever, and afterwards died with the symptoms of rapid phthisis. This occurrence was observed by us in several instances during that very epidemic; and in some the period which elapsed between the cessation of the fever and death, with all the symptoms and physical signs of suppurative tubercle, was not more than from ten days to a fortnight. On dissection the lungs were found everywhere filled with softened tubercle, which in many places had formed small anfractuosities.

The observations which I have now made to you refer to the connexion between typhus fever and the occasional production of tubercular

matter, as one of its secondary effects; and I think I have said enough to show you, that tubercular deposit and the typhous state frequently stand to one another in the relation of effect and cause. We might now inquire whether there are other forms of essential fevers in which the tubercular deposit is a necessary consequence, in which, to use the language at present in vogue, it becomes the anatomical character of the fever. You know that I am not fond of discussing the distinctions of fever. The cases which I have laid before you were examples of tubercular deposit developed in the relapsed period of fever; and although in this relapse certain anatomical characters were developed, we are not on that account to say that the essence of the fever in its relapse was different from that in its first period. You all know that typhus fever may relapse into typhoid fever, and typhoid into typhus. I am compelled to use the expression of one fever relapsing into another, which is an inaccurate one, for want of a better, and you all must know my meaning; but is there any form of fever in which the tendency to produce tubercle, or the actual production of it, is from the very commencement a distinctive character. The following circumstances occurred in the practice of one of the most eminent surgeons in this country, and, as far as they go, they seem to prove that there may be a true, essential, and tubercular fever, which also may be contagious, affecting many members of one family.

An infant at the breast, eight weeks old, was attacked with fever. The principal local symptoms were oppression of breathing and fullness of the abdomen. The child refused its food, and death took place at the end of the third week. On dissection, the lungs were found filled with miliary tubercle, and the same deposit was extensively exhibited upon both pleuræ and peritonæum.

The next case, which occurred in this family, was that of a girl, 7 years of age. She took ill just at the period of the death of her sister, and her symptoms were closely similar to those of the infant just spoken of. She had fever, oppression of breathing, and the swelling of the abdomen. It was thought that the origin of this disease might be from malaria, and on this account she was removed to the country; but she died within six weeks from the invasion of the fever. On dissection, a precisely similar state of parts was discovered; the viscera being extensively filled with disseminated tubercle, and yet without any suppuration of the deposit.

Now comes the most important fact connected with this history. The two brothers of this girl, who had been at school, arrived to spend their vacation just at the time of her death. They came to the country house in which she had died. Their ages were respectively 8 and 9 years. Within the first week the elder sickened; he had fever; oppression of breathing, soon followed by cerebral symptoms; he also died with signs of effusion on the brain; and, on dissection, the pia mater, arachnoid, lungs, and peritonæum, all presented the tubercular deposit, with the same character as in the preceding cases. Upon his death, his younger brother sickened; in this case, in addition to the symptoms of fever, the local suffering was principally referred to the

head. The child, after going through a tedious illness, recovered without showing any symptoms of phthisis. During his illness, the eldest sister, aged 12, became affected with fever, having the same general character as that which was presented in the other cases, but without any decided local symptoms; she also recovered.

It might, perhaps, be better were I to leave these facts before you without comment; but I cannot avoid expressing my opinion, that they go far to establish not only the existence of a form of fever, of which the anatomical result is tubercle, but also that this fever may be under certain circumstances, a contagious fever. Were we to confine ourselves to the division of the continued fevers into the typhous and typhoid types or forms, these cases should be placed in the latter category. Some might suppose, that the opinion which I have ventured to give as to the contagion in these cases is inconsistent with the doctrine of their being forms of so-called typhoid fever; but you will recollect, that I have impressed upon you to be very cautious in admitting the lines of distinction which authors have drawn between these forms of disease, and you may depend upon it that the number of diseases propagated by contagion is much greater than what is generally admitted. We can found no distinction between typhus and typhoid, and even other forms of fever upon the circumstance that one of these fevers, as, for instance, typhus, is contagious, and the other not. I have long believed in the contagion of the non-petechial, or, if you will, the typhoid fever of this country. In the epidemic of 1827-28, to which I have before referred, which was essentially an epidemic with the anatomical characters of the typhoid disease, we had abundant proofs of contagion; and in this very hospital many of our most zealous students were at that time attacked with fever.

It may be here observed, that although this epidemic was one essentially of the so-called typhoid form characterised by absence of the symptoms of putrescence, frequent relapses, recovery by crisis, and in almost all cases evidence of disease of the intestinal glands; yet the attendants on the sick, when they were themselves attacked, presented in more cases than one the symptoms of genuine tyyhus. It was during this epidemic that I contracted typhus fever; and shortly afterwards one of my clinical clerks, who had been distinguished for his zeal in attendance on the sick, fell ill. We both had bad maculated typhus without the symptoms of dothinenteritis; in my case the disease ran a course of fourteen days; and in neither instance was there any relapse.

II. *Lectures on General Physiology.* By CLAUDE BERNARD.

LECTURE V.

Numerous agents are employed in the experiments designed to demonstrate that contractility which is the essential property of the muscular fibre. In the living subject this property is manifested under the influence of the will; but when the will is wanting, we must have recourse to external stimuli in order to develope the muscular property.

For this purpose, Haller preferred to use nitric and sulphuric acids, alkalies, caustics, mechanical irritants, fire, etc.; the principal objection to these means is that they destroy the muscular fibre, and render subsequent experiments impossible. We now substitute for them agents of a less destructive character, such as saline solutions, chloride of sodium, for example, or bile, which possesses in an eminent degree the power of exciting muscular contractility; or, lastly, galvanism, which is decidedly the most convenient and suitable agent for this purpose.

We shall study, with the assistance of this agent, the properties of the muscular fibre, and the mechanism of that shortening which is its essential property.

When a muscular fibre contracts, we observe that certain undulations or zigzags are produced on it. Some physiologists have regarded these flexures of the sarcous tissue as the cause of its shortening, but it is evident that this is an erroneous hypothesis, for the contraction of the living fibre may take place without its assuming a wavy course. If we examine the tongue of the frog at the moment at which its fibres contract, we observe a simple shortening of the fibres without any undulations; they contract like caoutchouc, becoming thick and short, instead of long and thin as in the state of relaxation. It is certain that contraction takes place both in the striated and unstriated muscular fibres of living animals.

Some investigators have referred contractility to the envelope of the fibre, the sarcolemma, but this explanation falls to the ground in presence of the fact that fibres without their envelopes likewise contract. It is certain, then, that the property of contractility resides in the muscular element itself.

Physiologists have enquired whether a condensation of the muscular substance occurred during its contraction. There is a common experiment which proves that the muscular mass, while changing its form, is unaltered in volume. I will briefly describe it. A fragment of the muscular tissue of an eel or frog is placed in a glass vessel filled with water; a tube is inserted in the superior orifice of the vessel, so that the slightest increase in the bulk of the contents of the vessel will be indicated by the ascent of the liquid in the tube; an electric current is passed through the muscle contained in the vessel, and excites it to contract; the liquid in the tube neither rises or falls; hence we infer that the volume of the muscle has undergone neither increase or diminution in bulk in consequence of its contraction.

Muscles are not only contractile, they are elastic; after being contracted they return to their primary state. They possess, then, two distinct properties: *irritability*, in virtue of which they contract, and *elasticity*, by which they return to their primary condition.

What are the conditions which maintain the first of these properties? In the first place, we should specify *temperature*. The thermometric limits between which the muscles of the frog preserve their contractile power are—3° to + 38° [27° to 100° F.]*; beyond these points, muscle is instantly deprived of its contractile power, but a progressive diminution of contractile power is observed in proportion as we approach either of these extreme limits. It is in a medium temperature, which varies in different animals, that the property of muscle is most energetically displayed. This mean is about 97° F. in mammiferous animals, and about 104° F. in birds. Temperature, therefore, exercises a very great influence on muscular contractility. If we reflect on the condition of muscular fibre during life, we shall appreciate the importance of this consideration; this tissue, in fact, is in contact with the blood, and its temperature is that of the general economy. If the temperature of the blood is altered, the muscles are subjected to the baleful influence of this alteration. Cold blooded animals warm easily; warm-blooded animals, on the contrary, are warmed with difficulty; but whatever these differences, elevation of temperature, when carried to a certain extent, occasions death in all animals; and the limit of that extreme temperature at which life ceases, is very properly that at which the muscular property ceases likewise. In the frog this temperature is 100° F.; at this point its muscles lose their contractile power. It is different with the nerves; they continue to be susceptible of excitation, as is proved by the action of electricity. If we place a frog in water, at the temperature of 100° F., and thus kill it, and having thus killed it, if we excite the nerves distributed to one of its limbs which we have maintained at a lower temperature, we shall observe that the muscles of this limb will contract, while the galvanic stimulus will exert no effect on all those muscles which have been subjected to a higher temperature. In the mammalia, the muscles lose their contractility at about 113° F.; so that if we subject a mammiferous animal to a temperature of say 176° F., though he will live for a certain time, he will certainly die ultimately, and he will die at the moment at which his blood reaches the temperature of 113°. If we plunge a thermometer into his heart as soon as he expires, we will constantly find a temperature of 113°, and it is at this point that muscular fibre loses its contractility. In birds, whose normal temperature is higher, the temperature at which life and muscular energy can be maintained is relatively more elevated. Their normal temperature is 111° instead

* We may remind the reader of Mr. Fownes' convenient rule for finding the divisions of the Fahrenheit scale corresponding to the degrees of the centigrade thermometer:—*To convert cent. degrees into Fah. degrees, multiply by 9, divide the product by 5, and add 32; to convert Fah. degrees into cent., subtract 32, multiply by 5, and divide by 9.*—Ed.

of 97°; the difference is 14°. Fourteen degrees more is therefore necessary to destroy them; they will die at 125°. It is important thus to demonstrate that muscular fibre can only live and act at certain temperatures.

Another condition, a due atmospheric pressure, is also requisite for the free action of the muscular fibre. This pressure is represented by 150 *millimetres* [5 inches] of mercury; if this pressure is diminished, the muscle loses its contractility.

The learned professor illustrated this law by placing the recent and still pulsating heart of a frog under an air pump. As the air was removed the pulsations became feeble, and presently ceased altogether. When the air was readmitted, the pulsations recommenced vigorously.

This is not all, the muscular fibre must be in relation with certain gases; and here I may remark that tissues like animals require certain conditions in order to live. M. de Humboldt long ago observed that when the limbs of the frog were immersed in certain gases they ceased to move. He experimented successively with oxygen, hydrogen, nitrogen, carbonic acid gas, and pure air, and he perceived that the intensity of muscular movement varied remarkably according to the gas employed, but that the muscles invariably lost their contractile power much sooner in the irrespirable gases, and that in pure oxygen the muscular movements were more rapid and energetic than in atmospheric air. This property of oxygen is connected with the fact that muscle has a true respiration of its own.

Lastly, it has been thought that muscles require the intervention of nerves, not only for their functional activity but even for their organic life. It is observed, in fact, when nerves cease to act, as in cases of paralysis, that the muscles to which they are distributed grow pale and are atrophied, or converted into fat; it is supposed that these results would not ensue did not the nerves exercise a notable influence on the muscles. In reality, it is the involuntary quiescence in which the muscle is maintained which causes its atrophy; for the muscle is like the individual, it is liable to fatigue and requires rest, but protracted rest is injurious to it.

The rapidity and energy of muscular contractility has been measured, and shown to be far less considerable than has been represented, not to be compared, for example, to that of electricity. A fact of common observation will suffice to illustrate the relative slowness of muscular contraction. If, imagining that we have a heavy weight to lift, we make a great effort, and the weight proves to be slight or insignificant, we are involuntarily thrown to the side opposite to that on which we expected to find an obstacle to overcome; we are conscious of our error, but we are unable to check our muscular effort quick enough. There is an apparatus to measure with precision the rapidity of muscular contraction. It simultaneously directs two electric currents, the one on a muscle, the other on a magnetic needle balanced in a coil of wire; the needle is instantaneously deviated, while a very perceptible inter-

val elapses between the action of the pile on the muscle and the contraction of the latter. In regard to the intensity of muscular contraction, Weber has calculated that a muscle can raise 93 times its own weight to a height of 15 *millimetres*. The experiments of Réaumur and Spallanzani long ago indicated the singular power of muscular contraction. Their experiments related chiefly to the gizzards of birds, in which tubes of iron and lead are flattened and broken. The heart, also, has often served as an illustration of the force of muscular contraction.

When a muscle contracts, a variety of phenomena occur in the muscle itself and in the medium which surrounds it. First, there is a consumption of oxygen and a production of carbonic acid; 2, a liberation of heat; 3, a chemical change in the muscle; 4, the production of a current capable of deviating a magnetic needle.

A muscle has a respiration of its own; if it is placed under a bell-glass filled with oxygen, carbonic acid is produced, and this process is proportioned to the functional activity of the muscles. If the muscle is stimulated by a galvanic current the formation of carbonic acid goes on more rapidly.

The heat produced by muscular contraction can be measured by a thermometric apparatus; it may equal 3½° F.; the blood, therefore, which leaves a muscle is warmer than that which enters it. We shall see hereafter the influence of the heart on the temperature of the blood.

To prove that chemical change occurs in the muscle which contracts, we galvanize two muscles unequally, and we find that the muscle which has been excited the oftenest has lost most weight.

Such are the principal questions suggested by an investigation of *irritability*, the essential property of the muscular fibre. We shall meet with similar enquiries in studying the properties of the nervous system, a subject on which we propose to enter at the next lecture.

III. *A Review of the Surgical Clinique of La Charité.** By Alfred A. M. Velpeau.

Inflammations of the hands—Whitlows—Arteritis—Phlebitis—Purulent Absorption—Angeioleucitis—Adenitis.

It appears that the hand is a favourite seat of inflammation, for in our aggregate of 219 cases of inflammation, we find 39 cases in which the hands, and 37 cases in which the fingers were involved in phlegmonous disease. This proportion does not seem large when we reflect on the position and uses of the hand, which is the most active portion of the body, and more exposed than any other to the action of physical agents.

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* See *ante*, Vol. IV., p. 31.

I read in the table before me of 22 cases of inflammation of the left, and 17 of the right hand. This disproportion appears somewhat singular; it is due, perhaps, to accident, or, possibly, to an error in the statistics; or, we may explain the fact by observing that there are many occupations in which the right hand is used for more delicate purposes than the left; but I confess I do not dare to insist on this explanation.

Of these 39 cases, 32 occurred in men, the remaining 7 in women, an inequality which naturally results from the fact that the heavy tools which male mechanics employ are an incessant cause of irritation of the palm of the hand. In 37 of these 39 cases, inflammation was located in the palm.

Inflammation of the palm of the hand is superficial or deep-seated. If superficial, it occupies the sub-cutaneous cellular tissue, and presents no gravity; nevertheless, early incisions are advisable in such cases, lest the subjacent parts should become involved. The deep-seated phlegmon of the palm is a very serious affair; it is developed beneath aponeuroses, amid tendons, synovial sheaths, nerves, and vessels. On the thenar and hypothenar eminences, phlegmons often assume a peculiar form; a small collection of matter is found beneath the epidermis, communicating through one or several openings with a larger purulent collection beneath the skin; these are what I have proposed to call "shirt button abscesses" (abcès en bouton de chemise).

We have 25 cases of inflammation of the fingers occurring in men and 12 in women; the number of female patients here is greater than in the category of inflammations of the hand, and, if we consider the large proportion of men in my wards, we shall conclude that as many women as men are affected with whitlow. Women often prick their fingers with the needle, whence a frequent cause of inflammation.

In 13 cases, the thumb was affected, the index in 8, the middle finger in 7, the ring finger in 7, the little finger in one case. Here also you see the effect of mechanical causes. The thumb is used most, then the index; the ring and middle fingers are equally exposed to inflammation; lastly, whitlow is rare on the little finger.

Whitlow, or panaris, presents several degrees according to the seat of the inflammation. It may be subcuticular, constituting the *felon* (tourniole), or subcutaneous; or it may be located in the tendinous sheaths, or beneath the periosteum, which, in such cases, is often dissected up, producing mortification of the phalanx. This variety is especially common in the last phalanges; 14 of our cases are embraced in it.

Different therapeutical measures are appropriate to these varieties of whitlow. In the first variety, it is well to remove the epidermis early; in the subcutaneous variety, unless an opportune incision is made, there is a risk of the inflammation becoming subaponeurotic. Where the tendinous sheaths are involved, try to arrest the progress of the inflammation by premature incisions; but do not be too sanguine, such cases are commonly very serious. In the inflammation of the periosteum you should wait, for the tissues may reagglutinate (se recoller). After

these two latter inflammations, the finger may remain stiff and impaired in function from three causes: exfoliation of tendons, adhesions between the tendons and adjacent tissues, or, lastly, anchylosis. Here an important question arises; is it best to amputate the finger? I believe that there are many workmen to whom it is less inconvenient to be deprived of a finger altogether than to have a stiff finger. In such cases amputation should be performed in good season.

After examining inflammations in general from an anatomical point of view, and glancing at its development in particular regions, we come to inflammation as it invades certain systems of the economy, such as the arteries, veins, and lymphatics.

I will not stop to speak of arteritis, which is a rare affection, arising usually as a complication of some other lesion.

Phlebitis is more common, though still rare when compared with other phlegmasiæ.

I am somewhat embarrassed in stating the exact number of cases of phlebitis which have occurred in my service. Inflammation of the veins is not always accessible to the surgeon's eye; there are cases in which it is admitted by some and denied by other practitioners. Some surgeons believe that there can be no purulent infection without phlebitis; others recognize a purulent absorption without any inflammation of the veins. However, we have but a few cases; two of purulent infection, and two of phlebitis following varix.

Here, too, anatomy comes in. There are two species of phlebitis: external, in which the outer tunic is alone involved, and internal, which occupies the inner coat of the vein. These two species should always be distinguished; the first is trivial in its effects, the second is highly dangerous. Their symptomatology is as different as their prognosis. In the first, local symptoms first appear: heat and pain in the course of the vessel, red patches along the limb, corresponding to nodosities produced by the inflamed vein; there is engorgement of the cellular tissue around the vein. These local symptoms are followed by constitutional disturbances; there is fever, heat of skin, general languor, a pasty tongue, etc.

External phlebitis pursues the same course as phlegmonous inflammation. But this is not invariably the case; sometimes the inflammation traverses the thickness of the vein, attacks the inner coat, and gives rise to purulent infection. You will at once understand the gravity of internal phlebitis; it travels along the lining of a vein to a great distance, commencing, for example, in the leg and extending to the thigh, pelvis, vena cava, and even to the heart. The treatment under these circumstances is the same as that of purulent absorption; I shall not discuss it here.

We have had 36 cases of inflammation of the lymphatics and glands. The frequency of diseases of the vessels of this system is explained by their function and anatomical position.

There are lymphatics and glands everywhere, around organs and in their parenchyma, on the surface and in cavities, and when the parts

in which they are located become inflamed, the lymphatic system may become inflamed consecutively.

The lymphatics take up various materials which are to be returned into the circulation, which, passing slowly onwards through small and tortuous vessels, are often arrested in their journey; they then act as foreign bodies, and often produce inflammation of the vessel which contains them, and of the portion of the lymphatic system with which it is connected. When these materials reach the glands, which are a kind of sieves through which they must pass, they not unfrequently inflame the gland by means of the irritating corpuscles which they contain.

Of the 36 cases of inflammation of the lymphatic system which we have treated during the past year, 27 occurred in men and 9 in women. 11 were cases of angeioleucitis, 25 of adenitis. Of the 11 cases of angeioleucitis, only 1 occurred in a woman. This species of inflammation usually follows external injuries, wounds, burns, or excoriations, lesions which are commonest in men. Adenitis, on the other hand, is not infrequent in women. This affection occurs principally in particular regions, as the neck, and accompanies diseases which are common to both sexes, diseases, for example, of the mouth, nose, eyes, and ears.

The mechanism of angeioleucitis and adenitis is very evident. You have an excoriation, an irritation on the skin somewhere; there are necessarily some lymphatic branches at the same spot. Suppose now some disturbing cause, some perturbation, and a molecule of altered irritant matter enters a lymphatic, and, in certain individuals, with certain susceptibilities, inflammation is set up. In some cases, these altered particles may traverse the vessels without exciting any appreciable inflammation, and give rise to adenitis when they are arrested by glands.

Angeioleucitis may be caused in the way I have described, by the absorption of noxious particles, or by continuity, the extremity of a lymphatic branch being irritated, and the inflammation rapidly and far along the course of the vessel.

There is a peculiarity in adenitis on which I wish to insist. I have long sought to prove that something analogous to what we observe in the inflamed mamma takes place in other inflamed glands. Acute adenitis terminating in suppuration, like mammary abscess; presents three varieties. Pus may form between the inflamed gland and the skin, behind the gland, between it and the deep cellular tissue, and in the substance of the gland itself, in other words we have subcutaneous, deep-seated, and parenchymatous adenitis. This is readily understood; the inflammation sets out in the gland, but it readily extends to the subcutaneous cellular tissue; it may likewise extend to the deep-seated cellular tissue, or it may remain limited to the gland. These varieties are of much importance as regards the prognosis. The subcutaneous abscess will open spontaneously; the deep-seated abscess may be a very grave affair. Its contents must be evacuated early and freely by an incision.

CHRONICLE OF MEDICAL SCIENCE.

MATERIA MEDICA AND PHARMACY.

1. *On the Therapeutic Action of the Salts of Cerium.* By J. Y. Simpson, M. D.

At a late meeting of the Medico-Chirurgical Society of Edinburgh, we notice an adress of Dr. Simpson detailing some experiments of his with the salts of cerium, cadmium and tellurium, which are worthy of attention.

Dr. Simpson said that the salts of some seventeen metals were to be found in the Pharmacopœia. The remaining metals were thirty-one in number, few or none of which had been tried medicinally. He had lately drawn the attention of the profession to the therapeutic effects of nickel, which presented great similarity to those of iron and quinine, and in cases of sick headache appeared to him to be very serviceable. Two or three years ago, he had experimented with the oxalate of cerium; and latterly he had used it much in practice. The metal itself was discovered simultaneously by Klaproth and Berzelius in 1803; it exists in various minerals, and is generally found combined with other metals. Oxalic acid is the agent used to separate it; accordingly, it is met with commercially in the state of oxalate. However, he had employed the nitrate, which he gave in the dose of one grain twice or three times a day, in the form of pill, or in powder with gum tragacanth, etc., as also in solution. As the result of many experiments, Dr. Simpson considers it to be a sedative tonic of considerable value; in its action it resembles bismuth, and the nitrate and oxide of silver; with, however, some variation. He employed it first in chronic eruptions affecting the whole intestinal canal, a very intractable form of disease, and generally treated with arsenic and nitrate of silver; and in cases which had not yielded to these remedies, cerium had been tried with marked advantage. In irritable dyspepsia with gastrodynia and pyrosis, and in cases of chronic vomiting, it was very serviceable. In the vomiting which occurred during pregnancy, the relief it afforded was very certain. It was a good tonic; and, in his opinion, a useful substitute for the salts of silver, hydrocyanic acid, and bismuth. He had not used it much as a general tonic in convulsive diseases, as chorea and epilepsy, where the salts of silver were usually given; but it would certainly be attended with this advantage, that it could be persevered in without danger to the colour of the skin.

A few years ago, he had experimented with cadmium, which appeared to possess properties similar to those of antimony, and to be useful in producing diaphoresis and vomiting. In two or three cases, he had also employed a salt of tellurium; but its use was attended with very disagreeable results. A dose had been given by his assistant to a student of divinity at the university; and, from the odour which was exhaled, the student was obliged to discontinue for the session his attendance on the class. A friend of his own in Ireland also unwittingly gave a dose to a hospital patient; and next morning he was surprised by the other patients in the ward demanding their dismissal, as they could not remain in the company of such an odoriferous companion.

2. *On Emulsions of the Gum-Resins and Resins.* By M. CONSTANTIN.

Up to the present time the gum-resins and resins have been but rarely employed, on account of the difficulty of mixing them with liquids for administration. The purification of these substances, even by means of vinegar or alcohol, has been rejected; for, as Lemery very justly remarks, it is preferable to choose gum-resins and resins free from impurities, than to purify them by any means whatever. In pharmacy we have only the alcoholic solutions of gum ammoniacum and assafœtida, and the alcoholic and ethereal solutions of tolu, which substances I have most carefully examined, and all of which, when added to an aqueous liquid, very rapidly separate, the resins floating and uniting on the surface of the liquid. But when, as is frequently the case, we have to prepare a mixture or injection containing any of the gum-resins, gum ammoniacum or assafœtida, for instance, or a resin, more especially that of tolu, which mixes very incompletely, it is I think, of some importance to obtain a more ready and advantageous process for their admixture than any of those hitherto employed for this purpose. Among those mentioned in works on Pharmacy we find the use of mucilage, or what is preferable, the yolk of egg; but these means, although very good in themselves, become tedious when adopted in hospitals, where, in a short space of time, a large number of mixtures have to be prepared; and even when yolk of egg is used, the resins above mentioned are frequently but imperfectly mixed.

Having frequently had occasion to see the gum-resins prescribed, and among them that of assafœtida, which, as is known is a very energetic medicine, I endeavoured to find some means of shortening the process of trituration; and I think that the process I am about to describe will be a considerable saving in point of time, and also be more efficacious for mixing the gum-resins, and even the resins. The gum-resins will, in the first instance, claim attention, for the remarks I have to make on the resins are but a confirmation on the first-named process.

Having been called upon on several occasions to prepare mixtures and injections in which gum ammoniacum and assafœtida were used, the following was the method I employed for their preparation:—

I place the quantity of gum-resin prescribed, in small pieces, in a

marble or porcelain mortar, and add about four times its weight of alcohol. I then ignite the alcohol and triturate the whole with a porcelain pestle until the alcohol has all burned away. The gum-resin acquires the appearance of a soft extract. The liquid is now added in small quantities at a time, and a perfectly homogeneous emulsion is produced, from which no separation takes place on standing, and in which the gum-resin is very completely distributed, a result which is difficult to ensure when yolk of egg is used, even after long trituration. In this way the gum-resin is presented to the absorbent surfaces of the stomach and intestines much more effectually than it would be in the form of pill, and the action of the medicine is therefore more certain.

When the quantity of gum-resin prescribed is very large, the addition of yolk of egg will improve the emulsion, by preventing reunion of the resinous portion. A small quantity of powdered gum-arabic might also be added to the gum-resin after the combustion of the alcohol has ceased, in order to render the emulsion more perfect, but this would generally be an unnecessary precaution.

The resins afford results equally satisfactory. It is only necessary to add to them what they require to convert them into gum-resins, and powdered gum-arabic answers this purpose. To the resin, balsam of tolu for instance, twice its weight of gum-arabic is to be added, not forgetting the alcohol in the same dose as before, the mode of operating being also the same as for gum-resins. Balsam of tolu may be thus perfectly suspended, forming an emulsion, the taste of which is very agreeable, and has nothing repugnant to the patient.

As these processes are not described in any works on Pharmacy, I thought they might be deemed worthy of the notice of Pharmaceutists, being simple and expeditious, and affording satisfactory results.

The heat produced by the combustion of the alcohol over the gum-resins and resins, is not sufficient sensibly to alter the qualities of the product, for although some of the aromatic principles of the medicine must be volatilized, the quantity appears to be very small, the peculiar taste and odour remaining apparently undiminished in the emulsion. The loss may be considered as almost nothing.—*Journal de Pharmacie.*

3. *On the Preparation and Use of the Perchloride of Iron.* By M. GOBLEY.

Perchloride of iron had been almost abandoned as a therapeutic agent, when M. Pravaz, a distinguished surgeon at Lyons, proposed a new mode of applying it in the treatment of aneurism and varicose veins, which consists in injecting into the arteries or veins a few drops of a concentrated solution of the salt. Under the influence of this liquid all the blood within a distance of three or four centimetres is converted in a few minutes into a solid clot. This new mode of treatment, however, is only now being tested.

It has not yet been determined what is the real mode of action of perchloride of iron on the blood. According to some, it coagulates the

whole of the blood and all its elements. According to others, it acts only on the fibrine, and others again contend that its action is confined to the albumen.*

It still remains to be shown what is the nature of the clot, whether the perchloride is a simple hemostatic or a hemospasic, whether it acts as an irritant caustic or as a toxic agent, and, moreover, what is the maximum dose that can be safely applied.

It will be seen from these questions, which have been recently discussed in the Academy of Medicine, that some importance attaches to the preparation of perchloride of iron. M. Burin du Buisson, who made, with M. Pravaz, the first experiments with the new mode of treatment to which reference has been made, prepared in the following manner the chloride which they used. Peroxide of iron, previously heated to redness, was digested without heat for five or six hours with colourless and pure hydrochloric acid; the mixture was then heated over a water-bath, until about 200 parts of the oxide were dissolved in 1000 parts of acid. The process should be conducted with a porcelain capsule the weight of which is known. The liquid having been decanted from the undissolved oxide was carefully evaporated over a water-bath, stirring it continually until it acquired the consistence of a thick syrup, the weight of which was determined. This was mixed with half its weight of distilled water, heated for a short time, and then filtered. The capsule and filter were washed with a quantity of water equal to that previously used, and the whole subsequently brought to the density of 43.5° or 44°.

The chloride prepared in this way is subject to the objection of its retaining too much free hydrochloric acid. If, instead of stopping the evaporation at the point indicated by M. Burin du Buisson, it be continued for a longer time, it becomes still more acid. It is known also how difficult it is to keep for any length of time a solution of perchloride of iron without the deposition of insoluble oxychloride and the development at the same time of free acid in the solution.

In order to obviate these objections, M. Burin du Buisson proposed, in a new memoir addressed to the Academy of Sciences, to substitute the following process for that already described:—

Pure hydrochloric acid is to be saturated as far as possible with hydrated peroxide of iron; the solution is evaporated over a gentle fire to about one half, and then further evaporated over a water-bath, taking care to remove the aqueous vapours, as I had before indicated, as these cause the formation of hydrochloric acid and the deposition of oxychloride of iron. When the liquid has thus acquired the consistence of a thick syrup (in this state it crystallizes on being cooled, without, however, assuming a solid mass), the evaporation is stopped, and

* M. Burin du Buisson has ascertained that ten drops of solution of perchloride of iron, of 45°, added to the white of an egg diluted with thirty grammes of water, causes the whole to become, in fifteen seconds, a mass which, on inverting the vessel in which it is contained, remains adhering to the sides, and will not fall out for some time.

an excess of gelatinous hydrated peroxide of iron mixed with a little water is added; they are stirred together for a quarter of an hour, and then allowed to stand for several hours. Sufficient distilled water is added to make the density equal to 30° Baumé, and it is then left in contact with excess of hydrated oxide for eight days when it is filtered, and again allowed to stand for fifteen days. The density of 20° Baumé is that which MM. Valette, Desgranges, and Petrequin prefer for the treatment of varicose veins. For aneurisms these surgeons think it is sufficient to employ a solution at 20° or even 15°.

[This new mode of preparing the ferric solution has no material advantage over the former. The contact of the liquor with hydrated oxide of iron does not remove free hydrochloric acid so effectually as evaporation, as M. Burin du Buisson has himself admitted. It is known that solution of perchloride of iron, even when made from the sublimed chloride, has always an acid reaction.

If it be impossible to prepare solution of perchloride of iron without its being acid, and if it be important that it should be as little acid as possible, would it not be preferable to have recourse to the chloride of iron prepared by the process which I described in 1844?* The ferric solution would then be a preparation which the surgeon could prescribe of any strength he may desire. The dry chloride may be kept for a long time without change; it forms a clear solution with water; which also may be kept for some time without any sensible alteration. The chloride of iron prepared from hematite (according to M. Gobley's process referred to) is chemically more pure and more surely uniform than that made from the hydrated oxide. It also contains a smaller quantity of free acid. I believe, indeed, that it contains but a mere trace. If, in preparing it, the evaporation be continued beyond the point at which it becomes solid on cooling, I have observed that it decomposes into hydrochloric acid and oxychloride of iron. The solution which M. Burin du Buisson now prefers to use is but slightly acid when recently prepared, but it becomes more acid after being kept, from the deposition of oxychloride. It is true that, according to him, it is this excess of acid that prevents a further deposition of oxychloride, but in order to prevent the acidity of the liquor, would it not be better to employ a solution made extemporaneously from the dry chloride?

There is, it is true, one difficulty in the employment of the dry salt, namely, that the quantity of the solution required for an operation is always very small, but I have surmounted this difficulty by determining from experiment the proportions of perchloride of iron and water necessary to form solutions of the strength required for surgical purposes.

The following are the proportions for making solutions of certain densities indicated according to Baumé hydrometer:—

* This process is described at length in vol. iv., page 24, of the *Pharmaceutical Journal.*

Chloride.	Water.	Density of solution.
53·85	46·15	45°
34·65	65·35	30°
21·30	78·70	20°
16·35	83·65	15°

The dry chloride contains about a fifth of its weight of water; it is therefore always easy to calculate the quantity of anhydrous chloride in the solutions. Thus those of the densities indicated by 45°, 30°, 20°, and 15° respectively, contained 43.10,—29.70,—17.05,—12.10 per cent.—*Ed. Journal de Pharmacie.*]

4. *The Indigenous Medicinal Plants of California.* By GUSTAVUS L. SIMMONS, M. D.

In the American Journal of Pharmacy, Dr. Simmons brings to the notice of the profession many of the botanical treasures of California, and emphatically declares that "from the 'Sierra Nevada' range of mountains to the Pacific Ocean, hardly a mile of land can be traversed which does not yield either some well-known remedial agent, or a new specimen of apparently high medicinal power." We extract from this paper the author's remarks on two of the indigenous medical plants of California, which seem to possess valuable properties. One of them is the Spanish Amole or soap plant.

This plant was noticed by "Fremont" and other writers on California for its saponaceous properties, but it has only been since the occupancy of the state by the American people, consequent upon the gold excitement, that a knowledge of its medical properties has been known.

Presuming it has been botanically described, not having the authorities to certify the fact, I will merely give its chief characteristics only for the purpose of identification.

The "Amole" is a bulbous plant; leaves lanceolate, accuminate, radical, entire, glabrous, from 8 to 12 inches in length; scape from 3 to 6 feet high; flowers white, in terminal racemes, panicles small; perianth tubular, 6 parted, 10 lines in length; ovary 3 celled; bulb perennial, 3 inches in diameter, 4½ inches long; scaly; external scales dark brown and fibrous, internal layers white and tender.

Habitat.—Neighborhood of lagoons, Sacramento valley.

The bulb is the portion used for medical purposes. This, when broken apart and agitated with water, forms a soft and creamy mucilage, from which it has derived its name of "amole."

The mucilage resembles the "Mucilago acacia." Boiling thickens it, and a solution of the subacetate of lead affords no precipitation.

It has a sweet taste and leaves no unpleasant sensation in the mouth. Two drachms operate as a laxative in from four to six hours.

Its principal use in California is as an external emollient application. Many Americans while travelling through the states have been poisoned by the "Rhus toxicodendron," which grows there in great abundance. The poison from this article in California is generally of the most violent type, and the usual course of treatment has often failed to afford relief. Some persons when suffering from the malady were advised by the natives to make an application of "Amole," and after doing so found themselves relieved; until now the remedy is well established, and in common use.

Not only is it beneficial in subduing the inflammation consequent upon poisoning, but in all erysipelatous affections, and many cutaneous diseases, it has proved itself a safe and reliable remedy. It is prepared by taking off the coarse external scales of the bulb, and grating the remainder in a close vessel; a sufficient quantity of water is then added and the whole triturated until a thick mucilage is formed; this is strained through coarse muslin, and it is applied to the affected part in a similar manner to a cataplasm, at the same time it is administered internally as often as may be necessary to keep the bowels open.

"La Yerba Resinosa" (so called by the Californians) is another plant worthy of notice. It grows from 1½ to 3 feet high. Leaves alternate, sessile, oblong obtuse, serrulate, deciduous, 2 inches long; flowers collected into a dense capitulum; scales setose, monaceous; diameter, 1 inch; color, yellow orange.

The leaves, heads and stem of this plant are covered with a transparent resinous substance, which has a strong aromatic odor, resembling somewhat that emanating from the balsam fir.

This resin is most abundant when the plant is in full flower. At these times if the finger is applied to the under side of the capitulum, and allowed to remain there for a few seconds, upon withdrawing the resin will be found adhering in long transparent strings.

It gathers in tears around the base of the scales, and is a source of inconvenience to the traveller, who is obliged to come in contact with it. The plant flowers from June until August, and its odoriferous properties are so strong and peculiar that the scent which at first seems pleasant, finally becomes disagreeable, and even sickening.

An alcoholic tincture of the leaves and flowers in the proportion of two ounces to one pint of sp. vin. rect., yields upon evaporation two drachms of the resinous substance.

The medical properties of "La Yerba Resinosa" are those of a tonic febrifuge. The prevailing malady in California is intermittent fever. In some localities, at certain seasons of the year, no age or sex is exempt, and the discovery of an indigenous plant possessing the properties of the usual febrifuge remedies, cannot fail to prove a blessing, especially to those who reside at remote distances from cities and towns.

The usual manner of preparing this remedy is by decoction, although many make a tincture with some kind of alcoholic liquor.

The last method would seem to be preferable, as the resinous property of the plant is soluble in water only to a limited extent.

Its effects upon the system seem to be somewhat similar to those produced by cinchona, yet they more closely resemble those produced by the action of the eupatorium perfoliatum. Given warm, even when a chill or fever is present, it produces a profuse diaphoresis, and carried to any extent, catharsis, and sometimes emesis. It is used in dysenteries and diarrhœas, as well as fevers; and as these maladies in California are usually more or less complicated with intermittent symptoms, it is given with considerable benefit.

From its abundance and apparently high medicinal virtues it is to be hoped that medical men will generally test its efficacy, and if it does possess the attributed properties, have it placed in a prominent position in our Materia Medica.

5. *On the Remedial Properties of the Simaba Cedron, and on its Employment as a Substitute for Quinine.* By SAMUEL S. PURPLE, M. D.

We have been neglectful of our duty to our readers in not having noticed Dr. Purple's article on the use of this new agent for the cure of the miasmatic fevers, which appeared in the September number of the New York Journal of Medicine. The extensive circulation which we have in those portions of our country where the malarious diseases are so frequent, makes it especially incumbent on us to present to the notice of the profession all the new remedies which can be brought to bear on that class of disorders.

The simaba cedron was first proposed to the medical public as a specific for the bites of venomous snakes, and is used by the Indians of New Grenada, Costa Rica and the neighboring countries of South America for that purpose. Its great power as an anti-periodic was also known to the inhabitants of those countries, and its properties were soon tested by medical men of reputation. Dr. Cespédes of Bogota, M. Herran of France, Dr. Smith of San Francisco, and Dr. Magrath of Jamaica are cited by Dr. Purple as having testified to the virtues of this medicinal agent.

In the paper alluded to, Dr. Purple after having employed the cotyledon of the simaba cedron in various cases of intermittent, and also employed it as a remedy for neuralgia, arrives at the conclusions which we give below. He uses it in the form of a powder, and in ten grain doses every three or four hours.

That it possesses decided anti-periodic properties, and is therefore applicable in the treatment of periodic diseases.

That it is less likely than quinine to produce the aggregate of encephalic or neuropathic phenomena, induced by overdoses.

That it may, in large doses, repeated often, produce griping of the bowels, and even diarrhœa; but that these conditions are easily controlled by appropriate medicaments.

That, as a remedy in intermittent fever, it possesses properties, in many respects, equal to quinine, and in most cases is equally adapted to the curation of this disease.

That, in the treatment of yellow fever, it does not appear to possess any particular advantanges over quinine, but nevertheless is equally well adapted to fulfil the indications which call for the use of this latter remedy.

That it possesses marked tonic properties, and deserves a prominent place in this classification of the Materia Medica.

That in chronic dysentery, diarrhœa, dyspepsia, and all states of the stomach, accompanied with impaired or difficult digestion, its use will be found to be attended with benefit.

That, should a demand arise for its use in medicine, it is believed that it will be found not difficult to obtain a supply in quantities sufficient to afford it at a much less price than quinine.

6. *Gum Mezquite as a Substitute for Gum Arabic.* By GEORGE G. SHUMARD, M. D., Forth Smith, Arkansas.

The suggestion of Dr. Shumard, (which we notice in the Boston

Medical and Surgical Journal) that the gum from the mezquite tree is almost analogous to, and might be easily substituted for, the gum acacia of the pharmacopeia, is worthy of notice. The inexhaustible quantities which might be obtained from Texas, New Mexico, and the adjacent country, would prove a source of revenue as well as affording employment to the tribes of Indians now wandering over those plains, who would be glad to collect this substance for a very small compensation. Dr. Shumard describes the character of this growth, and the mode of obtaining the gum, as follows:

The mezquite tree, from which the gum is obtained, is by far the most abundant tree of the plains, covering thousands of miles of surface, and always flourishes most luxuriantly in elevated and dry regions. The gum exudes spontaneously in a semi-fluid state from the bark of the trunk and branches, and soon hardens by exposure to the atmosphere, forming more or less rounded and variously colored masses, weighing each from a few grains to several ounces. These soon bleach and whiten upon exposure to the light of the sun, finally becoming nearly colorless, semi-transparent, and often filled with minute fissures. Specimens collected from the trunks of the trees were generally found to be less pure and more highly colored than when obtained from the branches. The gum may be collected during the months of July, August and September, but the most favorable period for that purpose is in the latter part of August, when it may be obtained in the greatest abundance and with but little trouble. The quantity yielded by each tree varies from one ounce to three pounds, but incisions made in the bark not only greatly facilitate its exudations but cause the tree to yield a much greater amount. As it is, a good collector would probably be able to gather from ten to twenty pounds in a day; were incisions resorted to, probably double the amount might be obtained.

MEDICAL PATHOLOGY AND THERAPEUTICS.

1. *Intermittent Fever Treated with the Salts of Quinidine.*

The increasing scarcity and high price of the salts of quinia have for years past been a subject of serious uneasiness, more especially to the practitioners in malarious climes, and many experiments have been made with extracts of various analogous barks, in the hope that amongst some of them a substitute for this important article of the materia medica might be found.

The attention of the profession has been called repeatedly of late to a newly discovered alkaloid of cinchona, *quinidine;* and as it can be furnished at a much lower price, owing to its being obtained in large quantities from the cheaper barks, and as its advocates claim for it equal virtues with the salts of quinia, we consider the subject as one worthy of serious notice, and careful and prolonged investigation.

Among the most important papers on the use of the salts of quinidia, we would mention Dr. Pepper's article in the September number of the Medical Examiner; Dr. Upshur's contribution to the December number of the same Journal, and more especially we notice a table of 180 cases of intermittent fever treated in the Pennsylvania Hospital during the past year by Dr. J. Dorsey Cullen, one of the assistant physicians.

Dr. Upshur reports in his paper thirty cases treated with this drug, and whilst he acknowledges its power over malarious disorders, he declines to assent to Dr. Pepper's remark that the salts of quinidia were more powerful than those of quinia, as it had been occasionally necessary in his experience to resort to the quinine when the quinidine had been found inefficacious.

Dr. Cullen, however, uses the strongest language with regard to the curative power of the new alkaloid, and declares that with him it has superseded the use of the sulphate of quinia, being equally efficacious and about one third less in price.

The paper of Dr. Cullen is to be found in the January number of the American Journal of Medical Sciences, and is worthy of an attentive perusal. His table of cases is very complete and full, and from them we ascertain that of the 180 cases, 129 were cured with ten grains of the sulphate of quinidia, used in conjunction with a compound infusion of cinchona with iron. A return was in these cases prevented by exhibiting the remedy on the recurrence of each seventh day after the stoppage of the paroxysm. It was found necessary, however, both by Dr. Upshur and Dr. Cullen, to use the salt in large doses in some instances, but in the hands of all of these gentlemen the success has been amply sufficient to justify farther experiments.

2. *Absence of Chlorides from the Urine Diagnostic of the Onward Progress of Pneumonia.* By Prof. J. H. BENNETT, University of Edinburgh.

Prof. Bennett's remarks on the curious fact that the urine of patients laboring under pneumonia was deprived of its usual quantity of chloride of sodium, were published in the April number of the "Edinburgh Monthly Journal." We give an abstract of his investigations on this subject in the clinical wards of the Edinburgh Hospital. It certainly is an interesting point in the diagnosis of this disease, and one which any of our readers can easily verify for himself.

Simon and Redtenbacher first stated that chloride of sodium, a salt always present in healthy urine, was absent from that fluid during the onward progress of pneumonia, and returned to it when absorption of the exudation was about to commence. This statement was confirmed by Dr. Beale of London, who, in the 35th volume of the Transactions of the Medico-chirurgical Society of London, furthered our knowledge regarding it by additional valuable researches. My attention was directed to this remarkable fact during the present session by Dr. Robert Cartwright, a gentleman attending the clinical wards of the infirmary, who informed me that he had seen it occasionally of great service in a diagnostic point of view, in the

clinical wards of Prof. Oppolzer at Vienna. It so happened that a man, John M'Donald, æt. 25, had just been admitted labouring under well-marked simple pneumonia at the apex of the right lung. He was a labourer, who had enjoyed perfect health until two days before admission, when, on being exposed to wet and cold working at drains, he was seized with shivering followed by fever, and the usual symptoms and signs of pneumonia. On adding a drop of nitric acid to some of his urine in a test tube, and then dropping into it a little solution of the nitrate of silver, the fluid remained clear, although so great is the delicacy of this test, that a white cloudy precipitate is at once formed, if a very minute quantity of the chloride of sodium be present. It was on the fourth day of the disease that the observation was made, and the chlorides remained absent during the fifth and sixth days, during which period the disease extended from above downwards, until it occupied the upper two thirds of the right lung. On the seventh day a slight haze was observed in the urine, indicating that the salt was returning to that fluid, and the man expressed himself as being much better. On this day there was great dulness on percussion, all crepitation had ceased, the breathing was tubular with bronchophony. On the eighth day slight returning crepitation was audible, the dulness had diminished, but the urine, owing to some accident before the visit, had been thrown away. On the ninth day, however, the chlorides were abundant in that fluid, together with lithates, loud crepitation was now universal throughout the lung, and the dulness had nearly disappeared. From this time the man made a rapid recovery, never having been bled, and was discharged quite well on the sixteenth day.

I now requested Mr. Seymour, one of the clinical clerks, to test the urine of all the patients in the ward, and others who might subsequently be admitted, which he did, and thus collected a large number of observations, the results of which I shall allude to immediately. In the mean time another case entered, which seemed to point out the value of this test in a diagnostic point of view. It was that of a man, Donaldson, æt. 26, labouring under typhus fever, in whom the disease ran its usual course to the tenth day, when chlorides were demonstrated in it. On the eleventh day, however, pulmonary symptoms came on, and the chlorides were entirely absent from the urine. This led me to make, with the clinical class, a careful examination of the chest, when all the signs of pneumonia were detected in the lower half of the right lung. On the fourteenth day the chlorides reappeared, the pneumonic signs diminished (?) and the fever ceased with a critical sweat.

The third case was even more satisfactory in proving the moment of commencing and departing pneumonia by testing the urine for chloride of sodium. A man called David Murray, æt. 43, entered with pneumonia of the lower two thirds of the right lung. No consistent account could be obtained from him as to when the disease commenced, and it was impossible, therefore, to determine whether the coarse crepitation which was audible over the inflamed lung was the advancing or returning crepitation. But the chlorides were absent from the urine, which indicated that the disease was advancing. The following day complete consolidation had occurred, with dry tubercular breathing and absence of crepitation, and a minute quantity of the chlorides was found in the urine. The patient, however, instead of getting better showed no improvement, and the next day the chlorides had again disappeared, indicating extension of the pneumonia. On the evening of this day he was seized with acute meningitis of which he died. On dissection, in addition to universal cerebral meningitis, the whole of the right lung presented the usual characters of grey hepatization.

These cases serve to point out a remarkable connection between the absence of chlorides from the urine and the onward progress of pneumonia. I forbear from offering any opinion as to the theories which have or may be advanced on this subject. The fact requires to be more extensively investigated clinically than has yet been done to test its value. Still it seems to me, that where pneumonia exists, inferences of great importance as to the stage and progress of the disease may in this way be arrived at by the physician, of which he would be wise in future to avail himself, more especially when the test is so easily applied, and its character so readily determined.

Mr. Seymour tested with great care, and at repeated times, the urine of upwards of fifty other cases in the wards, embracing a great variety of disease. He found the chlorides absent in one case of phthisis, with intercurrent pneumonia, but in no other. They were also absent in one case of peritonitis, and in all the cases of small-pox. Further investigation will probably discover these salts to be absent in other diseases, which, although it may diminish the importance of the sign as distinctive of pneumonia, leaves unaffected its value as pointing out the onward progress of that disease. The whole subject, however, being so new in a clinical point of view, it is evidently premature to speculate in any way regarding it.

I need only now allude to one other point, viz., that if any phosphates exist in the urine, nitrate of silver throws down a faint sediment, which, although it cannot be mistaken for the precipitate of chlorides in healthy urine, may be confounded with the appearance it presents when small in amount. In such a case the action of ammonia, by dissolving the chlorides, is at once distinctive.

In the December number of the same journal, Dr. Bennett continues his enquiries on this interesting point, and reports three cases of pneumonia in which the absence of the chlorides was remarked. The fact being proved, it still remains to be determined "whether the absence of these salts is the cause or a result of exudation into the lungs. Whether the interference to the respiratory function, by diminishing the amount of oxygen absorbed, gives rise to those chemical changes in the blood which react on the urinary secretion. If so, what are the nature of these changes?"

3. *On the Transmissibility of Syphilis.* By M. CULLERIER.

The above author has come to the conclusion that syphilis is not transmissible from the father, but is only manifested in the fœtus when the mother has been infected. If we examine rigorously the case in which the father is supposed to have been the sole cause of hereditary syphilis, we shall find that, at the period of conception, he has transferred the contagion to the mother, who has then directly infected her offspring. Among other illustrative cases M. Cullerier cites the following: A man affected with secondary syphilis married before he was completely cured, his wife immediately became pregnant, and the child which she bore is now eight years old, and the elder brother of two other children, which are in the enjoyment of as vigorous health as itself. In another case, conception occurred simultaneously with the development of secondary syphilis in the father; yet the child which

was born is now six years old, and has always enjoyed the most robust health.

M. Vidal has related a case in which a healthy woman, on being united to a man having secondary syphilis, bore a child which immediately died of syphilis. Four years thereafter she married a healthy man, but the child of which he was the father was also syphilitic. Hence Vidal concludes that the semen makes a specific impression on the ovaries, which not only exerts an influence on the products of the primary conception, but also on those of every succeeding one. Cullerier remarks, first of all, that Vidal was able to adduce no proof that the woman, in the case he cited, was free from syphilis. Vidal has adduced instances (similar to those given in Dr. Harvey's excellent papers in *The Monthly Journal*, x. xi.), in which the first conception in animals influenced the product of subsequent intercourse. But these Cullerier does not consider of much importance as being *physiological*, not *pathological* facts. In fine, he considers that the hereditary nature of syphilis is incontestable, but that it is always due to maternal and never to paternal influence. The development of disease in the infant may occur at all periods of fœtal life, and at all periods of maternal infection, either during the existence of an infectious chancre, during the presence of secondary or tertiary symptoms, during the interval of these constitutional manifestations, or even when the mother appears in most perfect health. Hereditary syphilis generally manifests itself *during the first year of life*, and Cullerier avers that when the infant of infected parents has passed this period, it may be considered to be exempt from the disease. Many authors have maintained an opposite opinion, and believed in the manifestation of hereditary syphilis late in life. This is merely a convenient doctrine, says our author, devised to shield the compromised morality of certain persons. Thus an old author, Jacques de Béthencourt, who wrote in 1527, said that when he met with syphilis among monks and nuns, he always had the charity to believe that it was due to hereditary transmission!—*Memoires de la Société de Chirurgie, Tome IV.; and Archiv. Gen. de Med.* Sept. 1854.

[*Note by Translator.*—M. Cullerier's theory about the transmission of syphilis is a very consoling doctrine, if it be true, for in this country, as in France, the number of infected fathers far surpasses that of syphilitic mothers.]

4. *Case of Polydipsia.* By Prof. Bennett.

Margaret Shearer, a French polisher, æt. 34, a mother, admitted May 31. States that a year and a half ago she went to work at six o'clock, A. M., in her usual state of good health, and at eight o'clock, two hours afterwards, was suddenly seized with great thirst, which has continued ever since, accompanied by excessive discharge of urine. About three months afterwards, she was obliged to give up work on account of a pain in the loins. At various times she has experienced loss of appetite, nausea, fullness of the abdomen, palpitations, constipation or diarrhœa. Thinking that her strength has diminished of late, she entered the infirmary. On admission, the

amount of urine passed in twenty-four hours was 424 ounces—pale in colour—of sp. gr. 1005, not coagulable by heat or nitric acid, and containing no sugar, as determined by Trommer's test. She is a stout able bodied woman, and speaks of occasional slight complaints. She has a pale countenance, furred tongue, and dry skin; but in every other respect is quite healthy. Dr. Alison, who first treated her, ordered warm baths and astringents, and afterwards galvanic shocks to be passed through the epigastric region. On taking charge of the case in the middle of June, I ordered bitter tonics, and the diet was carefully arranged, and the amount of water drank limited, and mixed with milk and a little magnesia. No change, however, occurred, and she confessed that she could not admit of restraint with regard to the amount of drink. During the whole month of July, she was weighed daily, and the amount of water drank and emitted from the kidneys carefully measured. Her average weight was eight stone, which underwent little variation. The amount of water drank varied from 370 to 520 ounces, the average being 440 ounces. The amount passed varied from 350 to 500 ounces; and it was observable that it was always from 20 to 50 ounces less than the quantity drank. The sp. gr. varied from 1001 to 1005, and was frequently tested for sugar with the uniform result of its never being present. The bowels were generally open every other day, and the stool was of normal consistence and healthy appearance.

From the 9th to the 14th July, I tried the influence of narcotics, and she took three grains of opium daily, with 3iss. and then 3ij of solution of morphia. Under this treatment she frequently appeared drowsy and stupid, but sound sleep was never prolonged, and no diminution of the thirst and diuresis was perceptible. She then took large doses of gallic acid, and subsequently, at her own request, cod liver oil, under the use of which she became stouter, stronger, and the appetite improved. August 22d.—All other treatment was suspended, and she was ordered to take ten mimims of the liq. iodini. comp., which was continued to the 14th of September without any effect. On the 16th she was ordered *R. mass. pill. aloet et myrrhæ* ℈*j; ferri. sulph.* ℈*ij; ext. hyosciam,* ℈*j. ft. massa in pill. xij. dividenda. Two pills to be taken daily.* On the 26th there was diarrhœa, when the pills were discontinued, and an astringent mixture ordered. The report on the 1st of October is, general health good, and from an observation made for the first seven days of this month, it appeared that the thirst and diuresis had somewhat diminished, the amount of urine varying from 280 to 350 ounces. There was no further change up to October 10, when she left the house.

I prefer calling this case polydipsia, to diabetes insipidus, as frequent careful inquiry established the fact that it commenced with thirst, and that the increased flow of urine was a simple result of the quantity of water drank. In the present state of science, no reasonable theory can be conceived, explanatory of the fact, that a woman, apparently in good health, is suddenly seized with great thirst, and thereupon drinks two or three gallons of water daily, passes a corresponding quantity of urine, and that this continues for nearly two years without any marked change in her health. Where there is no scientific indication, the treatment is wholly empirical, and even the results of experience are wholly negative and useless. Astringents, diaphoretics, galvanic shocks, narcotism by means of opium, cod liver oil, iodine, and purgatives all failed. The latter, by increasing the alvine discharges, diminished somewhat the excretion of urine, but we could not flatter ourselves that she was

in any way benefited by her four months' treatment in the Infirmary. *Ed. Monthly Journal.*

5. *On Compression of the Arteries for the Cure of Neuralgia.* By M. ALLIER.

An individual, aged 48, of nervous temperament, experienced, during convalescence from a severe malady, the return of a neuralgia of the orbito-frontal nerve, to which he had been subject for some time. It resisted the employment of the usual measures. After seven days of severe pain, M. Allier proceeded to compress the carotid artery of that side, continuing the treatment from one quarter of an hour to another during the whole morning, intervals of five minutes only being allowed. A state of somnolence supervened, during which the pains disappeared; but they soon afterwards attacked, suddenly and with violence, the dorsum of the penis, extending from the pubis to the glands. Pressure upon the abdominal aorta caused their gradual abatement. This case is interesting in a double point of view—first, as a rare instance of neuralgia of the superior branch of the pudic nerve supervening upon a similar affection of the orbito-frontal nerve; and, in the second place, as illustrating the efficacy of compression in causing the cessation of neuralgic pains.—*Gaz. Méd. de Paris.*

6. *Case of Nocturnal Seminal Emissions Treated by Digitaline.* By M. LAROCHE.

Digitaline, of late much extolled and employed with success, according to many practitioners, in cases of nocturnal seminal losses, has yielded, in the hands of Dr. Laroche, a result which deserves to be mentioned. A young man, aged 18, presented himself some months ago to be treated for nocturnal seminal losses. The disease had come upon him about two months previously. For twenty days, the pollutions had not omitted a single night; his strength was gone, the appetite had left him, and his sleep was troubled by unpleasant dreams. M. Laroche prescribed three granules of digitaline (equal to a grain of the powder of the plant). The night following the administration of the medicine the pollutions intermitted for the first time. In three weeks he was cured.—*Gaz. Méd.*

SURGICAL PATHOLOGY AND OPERATIONS.

1. *Propositions in Regard to Cancroid.* By PAUL BROCA.

[While the medical mind is directed to the subject of cancerous diseases by the recent papers of Drs. Walshe and Druitt in England, and the discussion at the French Academy of Medicine provoked by M. Velpeau, we cannot do better than lay before our readers the conclusions of the famous memoir of M. Broca, which presents concisely the whole doctrine of the micrographic school in regard to cancroid, the epithelial cancer of the English writers, the epithelioma of Hannover and the Germans.—O.]

1. Cancroid is an homœomorphous tumour constituted by the elements of epithelium.

2. Cancroid tumours are distinguished from cancers by two series of characteristics; those, namely, which are determined by the naked eye, and those which are revealed by the microscope. The lesions of these two diseases are different, pathological anatomy consequently compels us to separate them.

3. The local development of cancroid presents many analogies with that of cancer, but we observe differences in the manifestations of the two diseases, differences which considered individually are perhaps insufficient to distinguish them, but which taken together form a group of characteristics as precise as any purely clinical characteristics can possibly be.

4. Cancroid is very often developed under the influence of purely local causes, such as slight but frequently repeated irritations; many surgeons deny the influence of local causes on the development of cancer, and it is certain that if it is ever affected by causes of this sort, it is only in exceptional cases.

5. Cancer is developed under the influence of a general diathesic cause. It is not so with cancroid. It is true, that in very rare cases, two or more cancroids may appear simultaneously or successively in the same individual. Their presence on several distinct portions of the cutaneous system is an evidence of the existence of a sort of diathesis in this system, just such as we observe when successive crops of warts are thrown out on the skin, just such as exists in many other purely local diseases. But no one can confound these local diatheses, limited to a single organic system, with the general diatheses, among which the cause of cancer is included.

6. Hereditary predisposition, which is often the cause of cancer, has not been hitherto found to have any connection with the production of cancroid. Undoubtedly, it is not impossible that two individuals of

the same family should both suffer from cancroid tumours; the calculus of probabilities indicates that this should occasionally occur; but these cases are as yet hypothetical, whereas the influence of hereditary predisposition in cancer is based on numerous and precise facts, not to be explained away as simple coincidences.

7. Cancroid only appears on parts covered by epithelium. Cancer, on the contrary, may commence anywhere that there are vessels.

8. Many organs in which cancer rarely appears, are often the seat of cancroid. Many organs in which cancer is common are never the seat of cancroid.

9. True cancer of the skin is very uncommon. The majority of the suspicious affections of the skin formerly designated cancer of the lip, breast, prepuce, etc., are nothing but cancroids.

10. The progress of cancroid is usually much slower than that of cancer. The duration of life when no operation is performed is much longer in cancroid than in cancer; longer in the proportion of 10 to 1 almost.

11. Cancer ordinarily commences by a circumscribed tumour; cancroid usually appears first as a button or pimple with a large base, as a wart, or as a papillary hypertrophy; or else as an excavated, scarcely indurated surface, covered for a long time by successive crusts, before it becomes the seat of a true ulceration.

12. These characteristics are so marked, that clinical observers have always been struck by them, and have thought it proper to bestow a particular name on the tumours which we now call cancroids.*

13. Cancerous ulcers give rise to much more frequent and abundant hæmorrhages than are produced by the ulcers of cancroid.

14. Cancer invades the glands more uniformly and more rapidly than cancroid.

15. Cancer and cancroid, when let alone, usually terminate in death; but in the case of cancroid death is the result either of the seat of the tumour, as in cancroid of the larynx, of exhausting suppuration, or of putrid absorption, there is nothing special in it. In cancer, death may arise from these same causes; but sooner or later there is produced besides a specific morbid condition, the cancerous cachexy, or infection.

16. Both cancer and cancroid may relapse after extirpation, but an examination of these relapses points out new differences in these affections.

17. It is demonstrated that relapse is infinitely more common in cancer than in cancroid. This truth has been recognised and proclaimed in every age, long, long before the introduction of the microscope in pathological enquiries.

18. It is certain that a great number of cancroids are cured by the knife; it is doubtful whether true cancer has ever been cured.

19. Cancroids only relapse near the site of their first appearance (par continuation) that is to say within the sphere of local action of the primary tumour. They appear either immediately on the site of

* See, for example, Dr. Denman's *Observations on Cancer*. London, 1810.

the preceding tumour, in its vicinity, or on neighboring glands, and this only exceptionally. Cancer often reappears in the same manner, but it also buds forth very frequently in distant parts of the organism.

20. In about every other case of cancer, we find, at the autopsy, cancerous infiltration in the internal organs; nothing of the sort is observed after death from cancroid. More than fifty examinations have been made in France of bodies of persons dying with cancroid, and in not one have multiple cancroids been detected; the unique exception quoted by Mr. Paget, even admitting it to be incontestable, by its extreme rarity, contrasts in the most striking manner with the extreme frequency of cancerous infection.

21. Cancroid is a tumour, cancer is a disease; the first is the result of a local affection of the cutaneous system, the second is due to a general affection of the economy.

22. The distinction between cancroid and cancer has been suspected, hinted at, and even treated of by numerous surgeons of the past century. Pathological anatomy only confirms and renders incontestable a distinction recognized by pathology proper.—*From the Mémoires de l'Académie de Médecine.* T. XVI.

[Most, if not all, of the "propositions" thus confidently laid down are contested by able pathologists. The very definition of cancroid is at variance with the doctrine that "superficial position is more essential to the type of epithelial structures than any shape of elemental cells or scales," and which consequently ranks cancroid, with its interstitial formation of structures analogous to epithelium, among heterologous, if not heteromorphous tumours. The seventh proposition is denied by Rokitanski, who gives an example of cancroid developed in the liver,* and by Virchow who found it as a primary disease in bone.† The cases reported by Mr. Paget, at p. 592 of the American edition of his lectures, and by Dr. J. C. Warren (On Tumours, p. 281), tell quite a different story from M. Broca's sixth proposition in regard to the influence of hereditary causes on the development of cancroid. Our present intention, however, is not to criticise these "propositions," but simply to lay them before our readers, adding a list of references to some works which those who have not yet examined this most interesting subject may advantageously consult.‡—O.]

* Pathol. Anat., I., p. 386.

† Würtsburg Verhandlungen, I., 106.

‡ On the subject of cancroid growths, the reader may examine Lebert's work "On Cancer and the Curable Affections confounded with it," Paris, 1851; Mr. Paget's 32d lecture; Rokitanski's *Pathologische Anatomie*, vol. iii.; Walshe on the Nature and Treatment of Cancer, London, 1846; Gross on Malignant Diseases, *Am. Med. Assoc. Trans.*, vol. vi.; Müller on Cancer; Bennett on Cancerous and Cancroid Growths, Edinburgh, 1849; Hannover, *Das Epithelioma*, &c., Of Epithelioma, a peculiar Tumour, hitherto generally regarded as Cancer, Leipsig, 1852; Warren on Tumours; Pott's works, by Earle, vol. iii.; Cæsar Hawkins, *Med. Chir. Trans.*, vols. xix. and xxi; various papers by Virchow in his Archiv. vol. iii.; Dr. Druitt's

2. *Chronic Hypertrophy and Excision of Tonsils.* By M. GUERSANT.

According to M. Guersant, hypertrophy of the tonsils occurs most frequently among pale, lymphatic children, who have a delicate skin, and are very susceptible of atmospheric influences. They are subject to frequent attacks of sore throat, and the hypertrophy occurs as the result of these. The swelling often disappears after puberty, hence, when excision is not demanded by the urgency of the symptoms, we should always (except in the case of very young children) wait until this period is passed to see what is effected by nature. Excision is generally indicated when the tonsillar enlargement interferes with important functions, as respiration or deglutition; but it may also be advisable in cases where the affection impedes the child's articulation, or renders it unable to proceed with its education on account of deafness.

M. Guersant condemns the use of the bistoury for the excision of the tonsils, as being both difficult and dangerous; and he disapproves of the employment of scissors, as rendering the operation tedious and laborious. He prefers, for this purpose, the *tonsillotome* of Fahnestoch, or the simpler modification of it recently made by M. Charrière of Paris. In cases where we do not wish to remove the whole of the tonsil, Guersant advises the ablation of a considerable portion of it, to prevent the necessity of a repetition of the operation.

As regards hemorrhage after excision, Guersant says that although in adults it is often abundant or even alarming, yet *in young children he has never seen it to occur to any extent.* Probably the vessels are smaller and more retractile in children than in adults. This fact, whatever be its explanation, is one of considerable importance as regards prognosis and subsequent care; for while little children may safely be sent home immediately after the operation, persons beyond puberty should be always kept under surveillance for three or four days. When hemorrhage from the tonsil is about to stop, the patients, in place of pure blood, expectorate bloody mucus. Sometimes sufficient blood is swallowed to provoke vomiting, and it is then ejected at once and *en masse*, to the great terror of the patient.

Treatment of Hemorrhage from Tonsils.—In simple cases the use of cold acid gargles, rest in bed for five or six days, the maintenance of strict silence, and the use of aliments easily swallowed, are quite sufficient to stop the bleeding. If the hemorrhage continues, pieces of ice

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paper advocating a reform in the nomenclature of cancerous affections was condensed in the *Lancet*, and will appear in the forthcoming volume of the *Medico-Chirurgical Transactions*. In part 1st, vol. viii., of *Guy's Hosp. Reports*, is an article by Edward Cocke, Esq., illustrated by eight lithographic plates of "a peculiar follicular disease," which must be classed with the cancroids. The late valuable contributions to the literature of cancer and cancroid by Robin, Follin, Walshe, Lyons, and other microscopists will be found scattered through the leading medical periodicals. In the present list, which has no pretension to completeness, we can only indicate a few of the principal sources of information.

may be held to the bleeding surfaces by means of a pair of dressing forceps, as has been proposed by Chassaignac. Or cold may be applied externally, by means of pounded ice applied to the sides of the neck, and the angles of the jaws. M. Guersant has invented an india-rubber *mentonnière* for this purpose. If these means are insufficient we may apply the actual cautery to the wound, or lay pieces of lint upon it saturated with the solution of perchloride of iron. When cauterization is done with due precaution there is no danger to be apprehended; a white cicatrix is left which becomes detached on the fifth or sixth day. —*Gaz. des Hôpitaux*, 15th July 1854.

3. *Acute Tonsillitis.* By M. CHASSAIGNAC.

M. Chassaignac prefers excision, either complete or partial, of the tonsils to all other methods of treatmont in cases of acute cynanche tonsillaris, and affirms that it is always followed by immediate and satisfactory cessation of all the distressing symptoms. The inflammatory condition of the tonsils, instead of counter-indicating the operation, is in his opinion favourable to its success.—*Ibid.* 24th August 1854.

4. *On the Collodion Treatment of Orchitis.* By M. RICORD.*

M. Ricord tried the collodion treatment, as proposed by Bonnafont, in thirty-eight cases of blenorrhagic epididymitis; and the following are the conclusions at which he has arrived :—

1*st*, Elastic collodian causes less suffering than ordinary collodion, but more than the other modes of treatment.

2*d*, It is not so efficacious a therapeutical agent as was imagined.

3*d*, It does not allay the pain, nor effect a cure more promptly than other modes of treatment.

4*th*, Its action is principally manifested on engorgement of the subscrotal cellular tissue, and on inflammation of the scrotum itself.

5*th*, It is only a feeble mode of exerting compression.

6*th*, If collodion only acts through the medium of the cold resulting from the evaporation of the ether, the application of simple ether, or of cold to the scrotum, would answer equally well.

7*th*, It is not rational to believe that collodion can cure orchitis and epididymitis, simply by protecting the diseased parts from the action of the air.—*L'Union Mèdicale*, 14th September 1854.

5. *Nœvus Maternus Treated by Galvano-puncture.* By M. DENONVILLIERS.

M. Denonvilliers presented before the Societe de Chirurgie of Paris a little girl, in whom he had cured, by galvano-puncture, an erectile tumour of the neck, the size of a hen's egg. The tumour pulsated isochronous with the beatings of the heart, and its whole aspect was evidently arterial. Galvano-puncture was applied five times, and at such

* See Va. Med. & Surg. Journal, No. vi. Vol. III., p. 526.

intervals that the electricity could thoroughly exert its coagulating influence upon the blood. Its effects were at first inconsiderable. It formed small islets of coagulation, which subsequently became blended; as the tumour got firmer, it became also smaller, and pulsated less strongly. Two vessels of some calibre, which entered the tumour, however, could not be obliterated, and the cure was consequently incomplete. M. Demonvilliers then determined to make two semilunar incisions, and to remove the tumour entirely. This operation, in which the two vessels were tied, succeeded entirely, and nothing but the eschar remained.

In the discussion, M. Verneuil remarked, that care must be taken to see a perfect cure effected in these cases, when, by any means, coagulation of the blood has been produced. The character of the tumour has then become entirely altered; they are changed into a new form of structure, which is often troublesome, and occasionally malignant. In one case, an erectile tumour had been changed into a firm mass by injection, and the introduction of needles. This firm mass remained a long time stationary; it then ulcerated, and changed into a cancerous ulcer. These erectile tumours, then, once rendered firm, should not be allowed to remain, but should be extirpated.

M. Verneuil had once the opportunity of investigating the firm structure into which an erectile tumour of venous character on the upper eyelid had been converted by the introduction of needles. It had remained unchanged for many months, and required extirpation. The examination showed that it had changed into a mass of fat, which was subdivided by tough fibrous septa. In the middle of the mass was a great number of very small cysts, from the size of a pea to a pin's head, which contained an albuminous fluid, and were in close apposition. It seemed to M. Verneuil without doubt that a growth of unfavourable character would have sprung thence had the operation of extirpation been delayed.—*Journal für Kinderkrankheiten.*

OBSTETRICS, &c.

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1. *On Uterine Tuberculosis.* By M. PAULSEN.

The author considers this pathological condition to be comparatively rare, only two cases having occurred in the Copenhagen hospital during ten years. On these two cases, and on four others, recorded by Reynaud, Louis, Bovin, and Duges, Paulsen founds an interesting monograph on the subject; a very condensed abstract of which, we shall lay before the reader:

Pathology.—The author considers the following points well established:

1st. Tuberculosis always occurs primarily in the mucous membrane, and thereafter secondarily in the parenchyma of the uterus. It occupies the mucous membrane alone in most cases. Its occurrence solely in the submucous or muscular tissues of the organ is doubtful, although the thickening of the mucous membrane by the deposit, and the thinning of the muscular layers consequent upon the expansion of the uterus, are very apt to mislead the observer as to its real site.

2d. Tuberculosis occurs either in the form of fine greyish granulations (which Rokitansky says is seldom), or as a simple infiltration into the inner layer of the mucous membrane, which ultimately softens, becoming a cheesy puriform mass, and destroying the walls of the organ.

3d. This destructive process may penetrate more or less deeply into the fibrous structure of the uterus, but perforation rarely occurs. As it advances, the walls of the organ become greatly hypertrophied, and its cavity distended by tuberculous exudation, so that its circumference is two or three-fold increased.

4th. Tubercle generally occurs in the fundus or upper part of the body of the uterus; and in general, it does not extend beyond the os internum. The cervix is occasionally affected, and then its mucous membrane becomes thinner than that lining the rest of the organ, and also changed in its glandular structure. When tuberculous, the author has observed the cervix become deranged in its follicular apparatus, discharging thin glutinous mucus.

5th. Although Rokitansky has never observed implication of the vaginal portions of the cervix, Paulsen considers that this certainly may happen, in the form of very small and fine granulations, or of erosions and small ulcerations, which result from infiltration of the follicles, and are arranged in little groups. This, however, he has never seen, and, like most pathologists, he believes that this part of the uterus enjoys almost complete immunity from the disease.

6th. Uterine tuberculosis is very often, almost generally, combined with a similar condition of the Fallopian tubes; but it may occur alone, and uncomplicated. Where both conditions exist together, the tubal tuberculosis is always the primary disease, and extends to the uterus. The Fallopian tubes, when affected, are swollen and tortuous, firm and tense; the structure of their walls is changed, becoming hard and white; and the mucous membrane of their fimbriated extremities assumes the appearance of a cauliflower excresence.

7th. Paulsen, like Louis, never saw tuberculosis of the vagina. In one case he observed extensive ulceration of it, but this was caused by the excoriating properties of the secretion from the uterus.

8th. The development of uterine tuberculosis seems never to extend over more than a year.

Diagnosis.—This disease of the uterus is liable to be confounded with the following pathological conditions of the organ:—

1st. Purulent collections in its parenchyma, where the liquor puris has been absorbed, and a whitish-yellow, cheesy mass remains, resembling tubercle in appearance.

2d. Discoloured clots of blood.

3d. Fibroid masses, the so-called "flesh tubercles." These may contain pus in a fluid or concrete state.

4th. Lisfranc's tubercular induration of the uterus, a condition in reality connected with carcinoma or epithelioma.

5th. Mucous follicles, granulations, or vegetations pathologically changed in the canal of the cervix. The ovula of naboth are sometimes as large as peas, from being filled with a firm transparent substance.

Etiology.—The uterus is generally an organ secondarily affected, and this only in cases of very extensive tuberculosis. The exciting causes of tubercles in it are very obscure. Kiwisch imagined parturition to be one, but this seems doubtful, as many cases occur in women who have never borne children.

Symptomatolgy.—This is very incomplete and uncertain. The most constant symptoms are amenorrhea, leucorrhea, and pain, the first occurring most frequently. The speculum does not assist us in our diagnosis.—*Hospitals Meddelelser.*

2. *Prostatic Concretions in the Human Female.* By M. VIRCHOW.

It has been alleged by Leuckart (see his article on "Weber's Organ" in *Illust. Med. Ztg.* 1. 2), that in woman there exists a true rudimentary prostrate, consisting principally of mucous follicles, and situated between the beginning of the urethra and the reflection of the vagina. Virchow also admits the existence of this body, and says that he has often found, at the neck of the bladder,—especially in old women, where the internal orifice is thickened,—round, greyish-yellow enlargements, in which there are gradually formed firm, dark-coloured bodies, lying embedded in the mucous membrane. These bodies he considers exactly indentical with or analogous to the concretions found in the prostatic portion of the male urethra.—*Virchow's Archiv.*

3. *Successful Cæsarian Operation.* By C. PAGENSTECHER.

The medical journals for the past two years have contained an unusual number of observations tending to prove the comparative safety of the cæsarian operation in those extreme cases of dystocia which demand the surgeon's timely interference. Here is another case of this character, published by Dr. Pagenstecher, of Elberfeld, in the *Monatsschrift für Geburtskunde und Frauenkrankheiten*, vol. i, part i, for June 1854. We condense an account of it from the French journal into which it was translated:

Hammes, æt. 33, was seized with labour pains on September 9th, 1852, a fortnight before the completion of her full term. She was the mother of three children, the youngest five years of age.

Shortly after her last confinement, she suffered from pains in the lumbar region and thighs; soon after, her legs and thighs became curved, the disease, however, remained stationary under the use of cod liver oil. Her pelvis at that time was well formed.

On September 9, Dr. Pagenstecher examined Mad. Hammes, and found a very considerable deformity of the anterior portion of the pelvis. The pubic bones united at an acute angle; the tuberosities of the ischia extended back towards the coccyx. The antero-posterior diameter was not over two inches. The placental souffle and the sounds of the fœtal heart were readily distinguished.

At 8 in the evening, the pains being violent, the cæsarian section was decided on and immediately performed. A living child was extracted. The mother bore the operation well; the wound was dressed with cold lotions, and a bladder of ice was placed on the abdomen.

On the 3d of November the patient was able to leave the house, and was put on treatment designed to prevent the further progress of the osteomalakia. O.

4. *Cæsarian Section Performed Thrice on the Same Woman.* By Dr. Barjavel.

In a Jewess, at Carpentras, of scrofulous habit and rachitic appearance, the child presented by the feet at her first confinement. The midwife and two surgeons who attended pulled so hard, that in their efforts at delivery they separated the child's body from the head, which remained alone in the uterus. M. Barjavel (the father of the author) found, when called to the case, the cavity of the pelvis narrowed throughout by exostosis, so that no course remained but the cæsarian section, which he performed, as usual, in the linea alba. In forty days the wound healed. In spite of the danger to which she exposed herself, she became pregnant again in three years, when the operation was again performed, and a living child extracted. The mother suckled it, and it is now alive. In four years more she became pregnant a third time, when a young surgeon attempted the same proceeding, but he was not equally fortunate, for the child, a female, was dead, and the mother sank in a few days from hemorrhage.—*Rev. Ther. du Midi.*

5. *Prolonged Retention of Life by Infants who have not Breathed.*

The long period during which life may, under certain circumstances, be retained by the infant who has never breathed, is a fact full of interest to the physiologist, the medical jurist, and the accoucheur. The experiments of Legallois show that, in the mammalia, the fœtus which has not breathed can resist death from submersion much longer than the fœtus in which respiration has been carried on. Puppies and kittens, immediately after birth, may be kept under the water for twenty-eight minutes with impunity; when five days old, they perish after sixteen minutes' submersion; and, when fifteen days old, they die as rapidly as other warm-blooded animals of any age, from deprivation of air. The human still-born fœtus can probably live longer without respiration than any other mammalian fœtus. The following cases are collected in the *Gazette Hebdomadaire* for December 1st, 1854, from

different sources. They are very striking, and very suggestive to the practical accoucheur.

Case I. A woman, aged 25, who had tried to conceal her pregnancy, was delivered when seated on a tub. The infant, born without any signs of life, was buried in a sand-pit, and, after remaining there for half an hour, was removed, and lived. This case is described by Dr. Weese in 1845, in *Badisch. Ann. f. Staatsarz*, x. 2.

Case II. In 1850, a young woman was tried by the tribunals of Berlin, who had buried her new-born male infant, believing it to be dead. After an hour, the infant was disinterred, and recalled to life.

Case III. T. P., a servant, aged 23, was delivered in a stable, when leaning against the wall, alone, in a state of unconsciousness, about half-past four, A. M., on the 16th of October. When she came to herself, she found the infant on the ground, having a spade lying upon it, with its cutting edge turned to the body. She took the infant, which was perfectly cold, believing it to be dead, and, with the placenta attached, wrapped it up in her apron, buried it in the garden. Suspicions arose that she had been confined: she confessed; and at half-past nine, the infant was dug up from a depth of thirty *centimetres*. It was lying on its face, with the placenta under the abdomen. Though cold, apparently dead, and pulseless, the cord was tied. For two hours, P., a surgeon, used means to reanimate it, when at last it began to breathe feebly, gradually signs of life became more evident, and it cried. Some slight wounds were observed on its body; wounds in the neck, which did not bleed at first, bled when the infant was restored. It took the breast greedily. On the 17th and 18th, the wounds suppurated; and, on the 19th, it died of convulsions. The physicians entrusted with the judicial autopsy reported that it had been inhumed before it breathed; and that it had not breathed till after it was exhumed; and that the statement of the mother was possibly true. She was therefore acquitted of the charge of infanticide, but was found guilty of concealment of pregnancy. This case is reported by Dr. Maschka.

Case IV. A. gave birth, about noon, in a private house, to an infant, who gave no signs of life. For an hour, different unsuccessful attempts were made to animate it. The skin became blue, and gradually warmth left it. It was considered dead, and in three hours it was removed to a cold room. [This occurred in January, and the weather was very cold.] Towards evening, it was closed up in a coffin. During the night, the windows of the room remained open. At 11 A. M. on the following day—that is, twenty hours after the birth—Dr. Maschka, being accidently at the house, was asked to look at the body. It was perfectly cold and blue; the eyes and mouth were shut; the joints and the extremities were flexible: there was neither rigidity nor cadaveric discoloration. Astonished at this latter circumstance, but not really doubting that the death of the infant was real, Dr. Maschka placed the stethoscope upon the region of the heart, when, to his amazement, he distinctly heard the sounds of the heart: they were feeble,

and at long intervals. It was impossible to appreciate the impulse of the heart against the walls of the chest, or to perceive any movement in the corresponding intercostal space. Attempts at resuscitation were made, but without any effect. At the autopsy on the following day, cadaveric discolorations and rigidity were present. The lungs were of a deep red, and contained no air; they were heavier than water. There was blood in the left, but none in the right side of the heart. It must be admitted—provided the observation of the reporter be correct—that this infant lived twenty-three hours after birth, and never breathed.

CASE V. The following case is extracted from the *Gazette des Tribunaux* of Feb. 20th, 1850:—A woman was tried for attempting infanticide: she had buried her infant, but it was dug up, breathed, and lived. The following are the facts. Marie and Renée lived with their father at Vernantes, in the *arrondissement* of Baugé (Maine-et-Loire). On the 16th of May 1849, Marie was alone in the house with her father. About half-past six, P. M., Renée came home, found Marie in a swoon, and called the neighbours to her assistance. Marie soon regained consciousness. One of the female neighbours, having observed numerous spots of blood, asked Marie if she had been confined. She replied, "No it is not yet time." Her father, however, having observed the earth disturbed in a place in the garden, asked her to explain it, when she replied, "I have been confined; but, as my child was stillborn, I buried it in the garden." The child was then disinterred. It was found five *centimètres* [about two inches] below the surface, with its face downwards, and with the placenta attached. Means were used to restore the infant, and it was ere long recalled to life. It was calculated that the infant had been three quarters of an hour under ground. The accused was acquitted.

The elaborate memoir of Dr. Maschka terminates with the following summary:—

1. New-born infants can live without breathing, not merely for half an hour or an hour, but for a very considerably longer period, even in circumstances the most unfavourable.

2. In such cases, there is obviously not only an arrest of blood in the capillaries of the skin, but the vessels of the different organs are either in a state of permanent contraction, or are filled with a column of stagnant blood.

3. The movements of the heart must gradually become very slow. Here, a very important question presents itself. How can there be circulation in the infant without respiration, and therefore without the production of arterial blood? This condition of passive life can only exist when assimilation is at a minimum, and when the oxygen of the maternal blood is consumed very slowly. The maternal blood must in such cases be sufficient to maintain life.

Dr. Maschka's essay is contained in the *Vierteljahrschrift f. prakt. Heilkunde*, t. iii, 1854. It contains interesting physiological discussions, which will repay perusal.—*Assoc. Med. Journal.*

TOXICOLOGY.

1. *Poisonous Properties of the Atractylis Gummifera.*

In a communication to the French Institute, Dr. Commaille, of Douera, in Algeria, gives an account of numerous cases of poisoning by the rhizomes of the atractylis gummifera of Linnæus, which are frequently mistaken for artichokes, and eaten by the inhabitants of that country with the usual results of narcotico-acrid poisoning.

In the learned description and analysis of this plant furnished by M. Commaille, he states that its toxic properties reside probably in a new acid, the *atractylic acid*, since when this principle is eliminated, the remaining portions of the plant produce no ill effects on animals; 2. That this poison acts as a direct irritant to the digestive canal, and stupefies the ganglionic nervous system; 3. That death follows at a considerable period after its ingestion, and that the best treatment in cases of poisoning by it consists in the use of emetics followed by lime water and magnesia; 4. That its toxic properties were known to Dioscorides, and that Galen attributed therapeutic virtues to its gum.

We append a description of this plant from Decandolle's *Prodromus*, in which allusion is made to its therapeutic uses. O.

"*Carlina gummifera* (Less), *Atractylis gummifera*, Sp. 1161 (Linn.); Subacaulis, foliis pinnatifidis, involucri exterioribus squammis subconvexis dorso et margine spinosis, apice tricuspidatis. In arvis et sterilibus Barbariæ, Hispaniæ, Siciliæ, Sardiniæ, Græciæ. *Arcana gummif.* (Wilden.), Sp. 3, p. 1699; Sibth. Fl. Gr. T. 8, 38; *Chamæleon gum.* Cass. *Dict.* 47, p. 509; *Cathamus gum.* Lamarck. *Dict.* 1, p. 639. Gummiresina ex involucro fluit, et in Sicilia ad viscum parandum, radix *ad ulcera fumentorum curanda* inserviunt et receptacula loco *cynaræ edulis*. Ex ejus involucro fluit materia quædam gummi resinoidea a Cl. Macaire (*Mem. Soc. Gen.* v. 6, p. 27) examini chemico submissa et *viscina* dicta.

2. *Camphor an Antidote to the Poison of Strychnia.* By S. H. Tewkesbury, M. D., Portland, Maine.

The frequency with which strychnia is used for poisoning purposes, has attracted the serious attention not only of medical men but the public generally. The deadly certainty with which it acts; the ease of administration, and the difficulties which surround every attempt to prove, with positive certainty, its presence in the stomach, all unite to give to this drug a dreadful notoriety. But lately, in our community, where such crimes are, comparatively speaking, so rare, we have seen two cases of poisoning occur under circumstances sufficiently strong to justify the *suspicion*, at least, that strychnia had been used, and yet

in both cases the courts and juries were unable to satisfy their minds that this poison had been administered. We therefore think the following experiments of Dr. Tewkesbury, published in the Boston Medical and Surgical Journal, of great importance, inasmuch as they give to us an antidote for this poison of easy administration, and if his statements are to be relied on, of great power.

Dr. Tewkesbury states that during the year 1842 he was called to see a person who had accidently taken an overdose of strychnia, probably three fourths of a grain, who was powerfully under the influence of the poison, with all the tetanic convulsions which mark its action. He gave him two teaspoonsful of a saturated solution of camphor with manifest effect, and a repetition of the dose brought prompt relief.

His attention being thus directed to this point, he instituted a series of experiments upon dogs to test the value of the camphor as an antidote. He says:

From the favorable termination of this case, I was led to suspect that there might be some antidotal power in camphor, or else the strychnine that was taken was an impure article, and that my patient would have recovered if no remedy had been given. Accordingly, for the sake of testing its purity and strength, and to satisfy myself as regards any counteracting influence the camphor might possess, I procured a couple of dogs, of about equal size and age, and gave one of them one grain of strychnine taken from the same bottle from which I took that given to the young man. I enveloped it in a piece of meat, and it was all swallowed without any waste. He remained as lively as usual for fifteen minutes, when he suddenly fell, convulsed, the whole body stiff and rigid. A partial interval soon followed, with panting, twitching and trembling of the muscles. This, however, was of short duration, for he was again seized with a sort of convulsive quiver of the whole body, which terminated the existence of the animal in twenty minutes after the poison had been taken.

To the second dog I gave the same quantity of strychnine, and in the same manner. He fell in a convulsion in thirteen minutes, with spasms similar to those of the other dog. I attempted to open the jaws, but they were firmly closed by the violence of the convulsions. I waited for the interval to follow, and introduced a stomach tube and gave him sixty drops of the saturated tinct. camphor. In ten minutes he recovered, so far as to stand up, but it was for only a short time; he staggered and again fell, trembling—but there was no rigidity about the muscles in any part in this convulsion. In a few moments he got up again and walked about with some difficulty, as the spasmodic action seemed to continue longer in the muscles of the legs than elsewhere. He had no return of a general convulsion, but for an hour at times appeared bewildered, with an occasional twitching of a muscle; but in two hours from the time he took the poison, he appeared as well as ever, and took food.

Two days from this time I gave the same dog two grains of strychnine. Convulsion came on in eight minutes. I gave two drachms of the tinct. camphor, and in one hour all spasmodic action of the muscles had ceased.

In one week I gave the same dog strychnia, gr. j.; tinct. camphor, ℥j., water, ℥ss. Not the slightest tetanic symptom appeared.

The day following I gave five grains strychnine. No interval followed the convulsion, and the jaws were so firmly closed that he died before I could introduce the stomach tube.

Dr. Tewkesbury concludes his paper with the report of a case of accidental poisoning from strychnia, occurring with a boy, aged 12, who had eaten a biscuit prepared to poison rats, which contained about 1½ grains of strychnia. Here the clenched jaws prevented the introduction of the stomach tube, and the camphor was thrown up the bowels in large quantities. This treatment, combined with the use of baths of camphor, had the happiest effects; the little sufferer being relieved in less than a half hour.

3. *Experiments with Fusel Oil.*

A liquid known in the United States under the name of fusel oil is extracted from the brandy obtained from potatoes, and is also sometimes met with in chloroform. It is to the presence of fusel oil that Dr. Jackson of Boston refers the deleterious properties which chloroform manifests in certain circumstances. This opinion of Dr. Jackson has not been admitted by most of the medical men of Boston, who, on the contrary, consider the oil in question to be totally inert. Brown Sequard of Paris, in his turn has undertaken a series of experiments for the purpose of discovering the facts on which such contradictory opinions are based, and he has arrived at the following conclusions: 1. That fusel oil is one of the most violent poisons when introduced into the economy by inhalation. 2. That when given by the stomach in considerable doses it produces no effect whatever, provided that due care be taken to prevent its passing into the respiratory passages. The contrary opinions maintained by Dr. Jackson and the Boston medical men find an explanation in their different modes of experimentation. Dr. Jackson made the fusel oil be inhaled, while the other experimenters gave it by the stomach. Besides, M. Brown Sequard has determined that, even freed from fusel oil, chloroform can still exert a poisonous action, and at the same time preserve all its anæsthetic properties intact. M. Brown Sequard mentions that Dr. Storer of Boston had prescribed the fusel oil in a number of cases of phthisis, and that in all of them the course of the disease had received a check.—*Société de Biologie*, in *Gazette des Hôpitaux*, March 4, 1854. *Ass. Med. Jl.*

4. *Poisoning by Common Coal Gas.*

Mr. Gartner, of Stuttgard, relates in the Wurtemb. Corresp. Blatt., the following particulars of a case of poisoning by the escape of coal gas in a dwelling house.

"The gas affected a lady, her servant maid, and also an English pointer dog. The lady was first seized; her illness began with an affection of the head, sickness, vomiting, and purging of thin rice-water-like stools, in which whitish flakes were observed. After twelve hours she recovered, but felt very drowsy. On the 5th day she experienced pain in the back part of the head, lassitude, vertigo tinnitus aurium, and loss of appetite, accompanied by a loaded tongue, a small pulse of 90, and cessation of the menses. Blood of rather a dirty dark-red color, presenting no buffy coat, was abstracted from a vein. Next day

the patient was worse; she was quite insensible, and lay with closed eyelids; the eyes were turned up, the pupils were much contracted, and unaffected by the influence of light; the face was red and swollen; there was trismus; the arms were flexed at the elbow joints; the respiratory movements were very feeble; the pulse was hardly perceptible; and the skin warm and insensible to touch. Venesection having been repeated, and suitable restorative remedies administered, the patient revived in three hours, and was quite well in a few days.

"In the servant girl similar, symptoms occurred, but not with such severity, which may be attributed to the fact that the atmosphere of her chamber had not been so strongly impregnated with the gas. She had severe cramps of the extremities, great jactitation of the hands, flexion of the arms at the elbows, great restlessness, and inclination to yawn. Her blood presented no buffy coat. Latterly she had a non-febrile bloody diarrhœa. She recovered in fourteen days from the date of her seizure.

"The dog was found insensible, and quite stiff, as if dead, but it soon recovered."

THERAPEUTICAL RECORD.

Anus—Fissures of.—M. Demarquay states (l'Union Medicale, Nov. 14th, 1854,) that the best treatment for rhagades, or painful fissures and excoriations of the anus, consists in the subcutaneous division of the sphincter ani, an operation devised by Blandin, and which M. Demarquay has performed fifteen times with success. The finger being placed in the rectum, the tenotome is introduced half an inch from the verge of the anus and insinuated under the mucous membrane of the bowel; the edge of the knife is then turned against the sphincter.

Anus—Prolapsus of.—Dr. Demarquay says that Blandin's method of excising a triangular portion of the sphincter in cases of obstinate prolapse of the rectum, is attended with great danger; he has succeeded by simply removing a portion of the mucous membrane, and then using galvanism, as recommended by Drs. Debout and Duchenne; only, in order to stimulate the levator as well as the sphincter ani, he prefers to use galvano-puncture in place of simple galvanism. He remarks that his dissections have confirmed M. Cruveilhier's assertion, that in old cases of prolapsus, a true paralytic atrophy of the sphincter ani occurs, and that cases of this sort must necessarily prove very intractable.

Dropsies.—At the Military hospital of Bruges, M. Buys obtains (*Arch. Belges de Méd. Milit.*) abundant diuresis and the absorption of dropsical effusions by a combination of equal parts of sulphate of quinia and sulphate of iron. Five grains of each salt is administered in the course of twenty-four hours.

Eczema.—Dr. Mend of Einbeck (*Hanover Correspondenzblatt.*) has treated in the last four years, 21 cases of eczema of different portions of the body by the simple application of raw cotton. The success of this treatment is so manifest, that the author prefers it to any other.

Hooping-Cough.—Our readers are aware that Dr. Arnold, of Montreal, attributes great efficacy to nitric acid lemonade, as it is termed, in the treatment of hooping-cough. An English physician, Dr. Gibbs, has recently published a monograph on this disease, in which he claims almost specific virtues for the nitric acid. The mode of preparation is simple. Into water, sweetened until it is almost of syrup consistence, nitric acid is poured until the mixture is about the strength of lemon-juice. A child of a year old should take a dessert-spoonful every hour. To avoid injury to the teeth, a gargle of carbonate of soda should be used after each dose.

Iritis.—We have already published* the testimony of Drs. Helbert and Hœring of Hamburg, in regard to the efficacy of spirits of turpentine in this important disease. Dr. Griffin, in the *Dublin Quart. Journal*, confirms the statements of these eminent physicians. He observes that in iritis, and in many other local inflammations, when local depletion, mercurials, and antiphlogistics generally have been faithfully employed, there often arrives a period at which the disease becomes stationary, and a perseverance in these remedies is followed by no result. It is at this period that turpentine, in the dose of 20 drops 3 or 4 times a day, becomes of remarkable utility.

Lumbago.—In M. Bonnet's famous work on the affections of the joints, in treating of diseases of the spine, he mentions incidentally the efficacy of *kneading* in cases of lumbago. Recently Professor Nélaton has had occasion to employ this treatment, and has found its results rapid and successful. A man who had fallen on his back experienced the most acute pain in the common mass of the sacro-lumbalis and longissimus dorsi muscles, and was unable to execute any movements of torsion or flexion of the trunk. He was brought to the *Hôpital des Cliniques.* M. Nélaton covered the lumbar region with cerate, and then with his thumb and fore finger he *kneaded* the muscular mass for five minutes; he was then relieved by a pupil, and, at the end of twelve minutes, the patient to his astonishment was able to move his trunk in every direction without the slightest pain.—*Jour. de Méd. et de Chir. pratique.*

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*See the number of this Journal for September 1853. (Vol. 1, p. 495.)

Necrosis.—In a memoir presented to the Surgical Society, on *Abscesses beneath the periosteum*, M. Chassaignac suggested a simple method of hastening the elimination of undetached sequestræ. It consists in injecting freely, through the fistula communicating with the dead bone, water slightly acidulated with hydrochloric acid. It is found that the liquid which has been thus employed contains very appreciable quantities of the salts of lime.

Phthisis—Iodine Inhalations in.—Dr. Barriere, of Toulouse, administers camphor, powdered and saturated with the vapor of iodine. This is obtained by placing in a tobacco-box powdered camphor, and a little muslin bag, containing a hundredth part in volume of officinal iodine. By shaking from time to time, we obtain after a few hours, especially if the vaporization of the iodine is hastened by the heat of the hand, a saturation of camphor, whose color will be near that of iodine. Camphor thus prepared irritates the nose more or less, but in the air passages the sensation is refreshing, agreeable, and induces a freer respiration. Camphorated iodine once known, is sought for with avidity by many persons, and is preferred by some to tobacco. Camphor, on account of its anaphrodisiac properties, is useful in other respects. Venereal desires, it is known, are powerful in the production of consumption.—*Revue de Therap.*

Pulmonary Diseases.—Dr. James Turnbull suggests that iodide of ethyle is likely to answer a better purpose than any agent yet employed for inhalation in diseases of the chest as well as in other cachexias. The compound resembles chloroform—being devoid of all the irritating properties of iodine and most other substances hitherto employed. In a case of dropsy from disease of the heart, he found it to produce a most beneficial effect.—*Am. Jour. Phar.* from *London Jour. Phar.*

Rheumatism.—M. Lebourgeois states in the *Gaz. Méd. de Toulouse* that he has found the following liniment extremely useful: ℞. Sulphuric ether, ℥ss; Tincture of soap, ʒx; Laudanum, ℥ss; Tincture of aconite, ʒvj; Camphorated oil, ℥iij.

Spasm of the Stomach.—Dr. William Johnson, of New Jersey, has found by experience in his own person, and by his practice on others, that chloroform is a most prompt and safe remedy for spasm of the stomach. In cases where laudanum and camphor had failed, even in large doses, 30 drops of chloroform produced speedy relief. He never found as much as 80 drops requisite in any case. In the same article he makes another hint which is well worthy of notice. He suggests in cases of chronic disease, that where opium is requisite to allay pain, he has found in certain individuals small doses to answer better than full quantities, producing the effect without being followed by nervousness, &c.—*N. J. Med. Rep.*

Uterine Polypus.—In Holland and in some parts of Germany the biborate of soda is commonly employed to induce uterine contraction.

In a case of obstinate metrorrhagia, depending on the presence of a small mucous polypus, attached to the fundus of the womb and slightly projecting from the cervix, Dr. Copland, availing himself of this property of borax, administered it in large doses, and procured the expulsion of the polypus in three days.—*Revue de Thérap.* Oct. 15th, 1854, from *Ann. Méd. de Roulers.*

Whitlow.—Dr. Brown, of Chatham, publishes in the *Lancet* the formula of a lotion which must shock the chemists, but which he asserts is signally useful as an abortive agent in the treatment of panaris. It consists of three grains of burnt alum and two grains each of sulphate of zinc and acetate of lead dissolved in an ounce of warm water. The lotions are to be repeated frequently during the day, and Dr. Brown assures us that they will prevent, in the majority of cases, the formation of matter. We are inclined to believe that frictions with mercurial ointment and extract of belladonna, or an early incision, are more reliable abortive remedies in such cases.

Xeropthalmia.—Dr. Taylor, of Edinburgh, finds that glycerine is the best substance to preserve the requisite humidity of the conjunctiva in that rare and strange affection which it has been agreed to call xeropthalmia.

BIBLIOGRAPHICAL RECORD.

I. *An Enquiry into the Pathological Importance of Ulceration of the Os Uteri: Being the Croonian Lectures for the year* 1854. By CHAS. WEST, M. D., &c. Philadelphia: Published by Blanchard & Lea. (From A. Morris.)

The whole question, about which this book has been written, as our readers no doubt are aware, is of comparatively modern origin. On examining many of the books still considered as standard works on diseases of women, we find little mention of this disease of the os uteri, and still less about its relationship to those constitutional symptoms, it has been thought to induce. An immense impetus was given to the study of uterine pathology by the revival of the use of the speculum, at the hands of the late M. Recamier of the Hotel Dieu of Paris. Since that time we have to date, not only the origin of this controversy, but also almost all of our really accurate knowledge concerning the pathology of the non-gravid uterus. A new era at once arose in this department of medical study, which led to its prosecution with a de-

gree of enthusiam fully commensurate with the apathy which had hitherto existed in regard to the subject.

The new method of investigation was not, however, introduced without resistance. In England the works of Sir C. Clarke and others were deemed satisfactory upon such subjects, and the innovation proposed by the French physicians was met by a storm of indignant rebuke and sarcasm. The use of the speculum was denounced in the Medico-Chirurgical Review, and a work on the subject published in 1836, by John Balbirnie, was mercilessly ridiculed.

"All hail Balbirnie," says the reviewer, "apostle of the speculum, a holy mission. We may imagine the zealous saint, eager to enter on his ministry, sallying forth and brandishing his peculiar weapon," &c.

Nevertheless, the new practice steadily gained ground, and in 1845, Dr. Bennett's work appeared. There was everything to captivate in the enthusiastic and simplified views of that author. Symptoms, hitherto, alike inscrutable as they had proven intractable, were traced to their origin; they were pronounced to arise from a purely local disease, and for their treatment only local measures were demanded. Such a ready and direct method of putting an end to suffering, in cases so perplexing and hitherto so unyielding to remedies, could not fail to attract attention, and these views became rapidly disseminated everywhere. They, as we have shown,* were adopted and echoed in this country, by the eminent Prof. Meigs of Philadephia. Dr. Bennett, in the second edition to his works, says, and we believe justly, that his first publication had wrought a marked change of opinion in a large portion of the profession respecting uterine pathology.

But there was a check in store for all this enthusiasm. Many eminent men distrusted them from the first, and those who did adopt these views to their fullest extent, soon found that the result in all cases was not satisfactory. The treatment frequently failed in fulfillment of the promises which had been made, and, disappointed, not a few turned away, feeling that the great problem was still unsolved. It soon transpired that the earnestness with which Bennett's views were combatted, was fully equal if it did not exceed, the enthusiasm with which they had been promulgated. Stormy debates on the question occurred in London and elsewhere, with which no doubt our readers are familiar.

It cannot be denied that the adherents of the new views, sustained themselves in all contests with marked ability, and we believe that they succeeded in establishing, unequivocally, the existence of the pathological state of the cervix for which they were contending.

But a new enemy appeared in the field when the labours of our author saw the light.

Dr. West, as physician to a large hospital, had ample opportunities for the investigation of the subject. He had already distinguished himself as a writer, and was well known to possess habits of patient and faithful investigation, which fitted him peculiarly for the task. In his hands the question assumed a new aspect. He admits the frequent

* Vol. III, No. III.

existence of ulceration of the os uteri, which some had denied, and entered upon this "enquiry into its pathological importance." The work is a model of perspicuous writing, and its investigations appear to have been conducted with that fairness which is the attribute of all real lovers of science.

In it our author proves himself an adversary, above all others, the most to be dreaded. If his opponent could pick a quarrel with him, it would be an immense relief to his feelings. But this is impossible, for he proceeds to his work in the calmest and most deferential manner, even administering his killing strokes with a kind, apologetic air.

The anatomy, physiology, and functions of the cervix first engage his attention. Those points are briefly but clearly and fairly disposed. From its lowly organised structure,—from its secondary physiological importance,—from the fact that its intimate structure is less subject to alterations than the body and fundus of the organ are during gestation and labour, and because it is comparatively insensible even to rude modes of therapeutical interference, he concludes, "that the assumption that some slight abrasion of the mucous membrane covering this part, is capable of causing a list of ills so formidable as are attributed to it, ought to rest for its support upon some other and stronger foundation than any inference fairly deducible from anatomical or physiological data."

His next enquiry is conducted in the dead house of St. Bartholomew's hospital. Discarding accounts hitherto published on the subject, on account of the want of sufficient discrimination with regard to specific, but most important details, he examined for himself 68 women who had died of other than uterine disease. Of this number, 15 were above 45 years of age, the remaining 49 between the years of 15 and 45. He found ulceration of the os uteri, alone in 11; complicated with diseased living membrane of the uterus in 3; with induration of the uterine walls in 3, making the total number, 17—12 others had the two latter lesions, making the total of diseased uteri, 29, very nearly one half of the whole number. None of these women had been supposed to be suffering from any grave uterine ailment, and the author submits if this very frequency of their occurrence does not militate against the view that such lesions have an important pathological significance.

By this enquiry was suggested a new question of no little importance. It had been held that ulceration of the os uteri gave rise to induration of the cervix, by an extension of the inflammation to that part. That the former if unmolested would finally produce the latter result. Bringing his statistics to bear upon the question, the view appears to be exploded, for he found induration of the cervix in 9 cases; "in 5 of which it was not associated with any other disease of the uterine substance; in 3 it coexisted with ulceration of the os; and in 1 with a morbid state of the interior of the uterus."

Side by side with the statistics of our author, it cannot be without interest to call attention to the celebrated report of Dr. Pollock on the same subject, made to the Royal Medical and Chirurgical Society of London, which was the occasion of an acrimonious debate, without

doubt still fresh in the minds of our readers.* As curator of St. George's Hospital, he examined 583 women, and reports finding but 14 cases of diseased mucous membrane of the os.

And, what is still further remarkable, 10 of these cases occurred in the examination of 44 women, made by Mr. Holl during his service for 1 year in the institution; thereby making it appear that the latter gentleman found the disease to exist to the extent of 25 per cent., whereas the former only found it in less than 1 per cent. of the whole number. Dr. Bennett accounted for this discrepancy at the time by suggesting that Mr. Holl being acquainted with the disease in the living woman was better qualified than his colabourer to find it in the dead subject. It will be observed that the position which he takes is in exact accordance with that of our author with regard to the frequency of this lesion, and it is curious to find that the two, so widely opposed, should make use of the same facts, each to substantiate his own position.

The facts which he has brought forward thus far are very significant, still Dr. West concludes that "other evidence must be adduced than that which analogical reasoning from the facts of physiology has suggested, or than that which examinations after death have furnished, before we shall be entitled to reject the opinion that inflammation of the cervix and ulceration of the os uteri are occurrences of very serious pathological importance—the occasion of nearly all the ills which affect the physical well being of woman." To produce this further testimony is his next step, which advances him to the study of the disease in the living subject.

He begins by referring to the harmless character of ulceration of the os tincæ, in cases of procidentia of the womb, where it becomes visible to the naked eye. We do not think he derives much support from this fact; and a little further on our reasons for this belief shall be stated.

Taking the opinion of his opponents that 70.4 per cent. of all the women suffering from uterine ailment have ulceration of the os uteri—a disease readily demonstrated by examination with the speculum, he proceeds to divide the subjects of his examination into two classes, viz: those with this disease, and those in which it cannot be discovered. He next proceeds to contrast these two classes of women as regards the difference in their liability to sterility, abortion, menstrual disorder, leucorrhœa, and the amount of pain which is manifested. His materials are derived from the clinical observation of 1226 cases, occurring in women who were in or out patients to the hospital.

Our space will not permit us to follow him in his elaborate analysis of the facts furnished by these cases. They are discussed with great fairness, and arranged in a series of tables, to which we refer the reader, passing on ourselves to record his conclusions, which we shall do in his own words:

"1st. Uterine pain, menstrual disorder, and leucorrhœal discharges—

* London Lancet, April 1852.

the symptoms ordinarily attributed to ulceration of the os uteri—are met with independently of that condition almost as often as in connection with it.

"2d. These symptoms are observed in both classes of cases with a vastly preponderating frequency at the time of the greatest vigor of the sexual functions, and no cause has so great a share in their production as the different incidents connected with the active exercise of the reproductive powers. But it does not appear that ulceration of the os uteri exerts any special influence, either in causing sterility or in inducing abortion.

"3d. While the symptoms are identical in the two classes of cases, they seem to present a slightly increased degree of intensity in those instances in which ulceration of the os uteri existed.

"4th. In as far as could be ascertained by careful examination, four fifths of the cases of either class presented appreciable changes in the condition of the uterus—such as misplacement, enlargement, and hardening of its tissue, while frequently several of these conditions coexisted. An indurated or hypertrophied state of the cervix uteri was, however, more frequent in connection with ulceration of the os uteri than independently of that condition.

"5th. The inference, however, to which the last mentioned fact would seem to lead, as to the existence of some necessary relation, such as that of cause and effect, between ulceration of the os uteri and induration of the cervix, is in a great measure negatived by two circumstances:

"1. The number of instances in which an indurated cervix coexisted with a healthy os uteri.

"2. The fact that, while induration of the cervix was present in 25 out of 46 cases in which the ulceration of the os was very slight, it was altogether absent in 9 out of 16 cases in which the ulceration was noted as having been very extensive."

From these inferences the author proceeds to state his conclusions. They are altogether adverse to the doctrines of the "womb burners." This epidemic indeed had already began to subside; acute cases are now rare; still the disease exists in abundance in a chronic form. Its victims must be up and doing, for Dr. West assures them that their "simplified study and treatment of uterine disease" amount to nothing, inasmuch as he cannot regard ulceration of the os uteri either as the general cause of the symptoms which have been attributed to it, or even as a general concomitant of them, and index of their degree and severity.

He tells them that this royal road will not lead them to knowledge, although it has taken many to much profit, and that they must don their armor, leave its smooth and pleasant pavements, and plunge into the untrodden thicket, though it bristle with thorns that overshadow and conceal the true pathway to the yet unreached goal.

Nor does he stop here; they had some comfort, for they could point to the cases which had obviously received benefit from their plan of

treatment. The pitiless man robs of this, for he tells them that their trying procedures had nothing to do with such recoveries, that these sprung from the auxiliaries it was thought necessary to employ in connection with them, such as absence from the marital bed, rest in a horizontal posture, careful attention to the diet and to the state of the bowels, and finally to that agreeable journey or pleasant residence by the sea side which wound up the treatment.

But it is easier to destroy than to build up, and it is our mournful duty to record, that in pulling down this dazzling house of straw, fragile as he found its elements, our author's strength became exhausted.

With no comfort in the past, without hope in the future, amid the scattered fragments of his late contented home, he has left the weary sojourner without where to lay his head. It is true he indicates the possibility of the erection of the true edifice, whose foundation shall be everlasting and whose superstructure shall be of the enduring granite. But of this he gives but a dim and shadowy outline. Here he points out a quarry to be worked, there he indicates where excavations may be made with the possibility of finding some of the true material, but not one stone does he bring to start the builder.

He assumes that the causes of uterine disease are very varied, that its symptoms may depend upon a variety of conditions; and while the suggestions which he makes are hardly novel, they are of the most vague and unsatisfactory character.

In short, he establishes nothing in the place of the doctrines he has laboured so much and so well to overthrow. Nevertheless this cannot be urged as an objection to his book, for it is true of our science, more than perhaps of any other, that he who explodes an erroneous theory or system, does often more in its advancement than many who contribute even important isolated facts.

During the progress of our task, in our earnest desire to arrive at a solution of this vexed question, certain strictures arose in our mind, which, in conclusion, we will briefly mention. The results of his clinical observations were startling, and we should consider them absolutely conclusive, if we did not believe it possible that they might be defective in one particular. His investigations were all made upon women whose circumstances in life obliged them to go to an hospital for medical aid, and we believe it has been observed that uterine disease reacts less powerfully and exquisitely upon the general system, in women accustomed to hardship and privation, than it does among the indolent and luxurious classes.

Assuming this to be true, his unfortunate selection may still leave many of his most important points open questions. The extensive sympathies of the uterus are exhibited, as professor Simpson observes, by its constitutional reactions in the gravid state, and he contends that when diseased, the non-gravid uterus follows the same law. It must be clear, therefore, that the extent of these reactions must be in proportion to the nervous susceptibility of the individual, and we know, that among the poor and labouring women, that this is often dull and obtuse. We think this law applies with great force to the example re-

garding the behaviour of ulceration of the os, when observed in procidentia of the womb, adduced by our author in support of his position. An ulcerated os under such circumstances, can certainly bear no comparison with the same state of things occurring in the uterus when properly poised in the pelvis, having all its sympathies active and normal. Furthermore, the author insists strongly on two points, to which he evidently attributes great importance—1st, the frequency with which he found this erosion of the os in healthy women; 2ndly, the fact that it was always associated with the period of the greatest functional activity of the uterine system. In reference to both of these points, we venture to hint a source of misconception, which we admit is purely conjectural. It has been ascertained, chiefly by the researches of Bischoff, that for some days preceding, and after the subsidence of the menstrual flow, the lining membrane of the uterus acquires a deep red tint. Is it, therefore, unreasonable to suggest that the congestion may extend, and by showing itself around the os, give rise should the examination be conducted at this time, to that condition which might be mistaken for the form of ulceration described by Bennett and others?

But whether we admit his conclusions to their full extent or not, no one we think can deny but that the work of our author will tend to the most salutary results, in checking the indiscriminate employment of the speculum treatment. While uterine disease does react upon the general system, producing particularly derangement of the nervous system, it is likewise equally true that a morbid state of the constitution, and primary nervous derangement, tend in turn to disorder the functions of the womb. Here we believe is the source of the difficulty, for it is precisely the latter class, where obviously it is unnecessary, that most frequently become the subjects of the treatment. The reason of this we think can be easily pointed out. There is a large class of women who, after the freshness of youth is gone, set up the character of professed invalids. Either from some unspoken yearnings of the heart, or from some other cause, they abandon themselves to a listless indifference to the ordinary charms of life, and court seclusion. The avenues to the brain are all closed, the eye brings them no pleasant sight, the ear no entrancing sound; both taste and feeling become rapid and joyless. In this condition the mind devoid of impressions from without, preys upon itself, and intense selfishness absorbs the energies. Upon a principle well illustrated by Dr. Holland, in his paper upon the "effects of mental attention upon bodily organs," and fully recognised by all physiologists, such women are just in the state to develop painful sensations in any part of the system. They pet their sufferings and are apt to fancy themselves the victim of any prevailing disease. The real victim shuns investigation and conceals her condition, but they court investigation of their uterine complaints. Upon the same principle that induced Mrs. Lilywhite in Nicholas Nickleby to boast of having to take the new medicine that had just destroyed a

whole family, the very horror of the thing has for them a peculiar charm.

Every one must be more or less familiar with individuals affected as we have described with varying degrees of intensity, and we believe it cannot be denied that this class of persons has within the last few years, largely swelled the list of uterine patients; a fact which more than any other, goes to show the great value of our author's investigations. Such treatment when applied to them is not only useless, but positively pernicious, because it fosters and perpetuates, in a manner which must be obvious, the very state of mind and feeling which is the source of all the difficulty. In this hurried and imperfect manner we have now presented our readers with an outline of the arguments employed and the conclusions arrived at in Dr. West's lectures, together with such reflections as our limited space would permit.

We thought this much due to the very great importance of the subject; and we trust, if they do nothing more, that our labours may induce many, who otherwise might not have done so, to secure the book and read it for themselves.

II. *The Principles of Animal and Vegetable Physiology: A Popular Treatise on the Functions and Phenomena of Organic Life.* By J. Stevenson Bushnan, M. D., Physician to the Metropolitan Free Hospital, &c. Philadelphia: Blanchard & Lea. 1854. (From J. Woodhouse.)

It is an exceedingly difficult thing to determine how much the interest of the medical profession would be promoted by the introduction of physiological studies generally among the people. Could every educated person be made a good physiologist, could every heart feel ready to join in that perpetual hymn in honor of Deity, which Galen piously said the study of this science was, then indeed the proposition would be a very plain one. Our art would rise to a dignity undreamed of at present by its most ardent votaries, and attain to that degree of appreciation by the community, as to sway an influence in the social system, scarcely to be conceived of in the present state of things. Then we should hear no more of vaunted nostrums—of mysterious cures—of infallible systems,—the popular credulity existing with regard to which in this age, with its wonders of steam, and telegraph, and its progress in science and social politics, constitutes in our opinion the greatest wonder of them of all.

Now if a general knowledge of the science of life as taught by physiology would tend to dispel these illusions, does not the fact point out the source of all the evil? Does it not teach that the masses have more to unlearn, owing to existing false views, than they have to learn about disease and its treatment? Is it not clear that the people expect too much, at present, from medicine, and not finding in the true man of science the realization of their ideas with regard to its power to fur-

nish a cure for every disease, are they not driven to seek it in the promises of the charlatan which meet all their sanguine wishes; thereby often heedlessly casting away all benefits which might arise by following sound advice, dictated in accordance with nature's laws and her stern requirements?—They are not to be blamed for this thing—knowing better, men would not wantonly jeopardize their healths and lives—hence not derision, it is sympathy which is required for them at our hands.

Enlightenment on these points is what is wanted; but how to impart this, becomes the great question. As we have already intimated, a smattering of the science of physiology is of doubtful benefit, still it appears that it is through this channel that we are to expect the most. Under this idea many eminent men have set to work to prepare treatises on the subject for popular use.

The book before us belongs to this class. It is in our opinion scarcely comprehensive enough to effect much good, in the hands of the general reader. It presumes too much upon the possession of an amount of general information with regard to the subject, which is hardly to be found in the purely popular reader. Following a more elementary and general treatise, we can conceive of its being read by the masses with profit, and as such we recommend it.

III. *Transactions of the American Medical Association.* Vol. VII.

The seventh volume of the "Transactions" is presented to the public by the New York committee of publication in a very neat garb, well bound in muslin, and forming a handsome book of 650 pages. It contains the minutes of the St. Louis meeting of the Association, Reports on the Epidemics of various parts of the United States, the Report of the committee on Medical Education, an elaborate and very valuable contribution from the pen of Dr. Porcher on the Cryptogamic Plants of the United States, a tribute to the memory of the physicians who lost their lives at Norwalk, and the Prize Essay by Dr. Brainerd; besides various other papers read before the Association during its sitting.

The limits of our Journal prevent us from giving this volume an elaborate notice. We feel no desire to review the minutes of the Association at its last meeting; suffice it to say, that but little transpired there calculated to add to the dignity of the American medical profession or increase the influence and usefulness of the Association. Reserving Dr. Brainerd's prize essay for another occasion, we will briefly notice the report of the committee on medical education from the pen of Dr. J. L. Cabell, of the University of Virginia.

It is almost needless to say that this paper gives evidence of careful thought, and that the propositions contained in it are worthy of serious attention. The difficulties that surround the whole question are duly weighed, and the subject treated with a dispassionate tone and a spirit of earnestness that cannot be too much commended.

The author assumes as an acknowledged fact, that the "American system" is defective in many particulars, and proceeds to point out some of the most glaring of these defects. In truth, he boldly strikes at the very root of the evil when he discusses the great want of preliminary education amongst the larger number of medical students. Remedy this evil and the battle is half won. Divest the mind of that impenetrable self sufficiency which ignorance wraps around it, and it requires but a glance at the splendid domain which the science of medicine and its collaterals throw open before it, to prove the necessity for a zealous, long continued and well directed struggle before its truths can be mastered. A good preliminary education brings with it, as a necessary sequence, a good professional education.

Our reporter discusses at some length the present regulations for the government of the medical colleges, their requirements from applicants for degrees, their length of course and their standard of examination. He sees in all, many and woful errors, and yet he hesitates to suggest the remedy, indeed very wisely doubts whether at this time there is a remedy. He proposes to the colleges, however, that some of them at any rate should extend their term, and introduce a system of teaching better adapted to the wants of many of the student class, than a simple resort to a course of lectures unconnected with any regular method of examination. He points with great propriety to the success of the school of which he is a component part, a school where the elements of the science are taught, and recitations are daily required of the student until he is conducted step by step along the rugged path before him. We cordially agree with him in the belief that the "American system" would be greatly improved by the introduction of the practice of daily examinations by each professor, and are much disposed to think that some of the schools would not be sufferers by the adoption of his suggestions. In other words, divide these institutions in two classes; elementary colleges where the student is trained and grounded into the rudiments, and carefully led forward by daily instructions and examinations until he acquires the theory of medicine; the other class of schools, clustering around them every facility for clinical study, surgical experience and hospital teaching, will then enable the student to pass safely from theory to practice, from the study of books to the study of men. He enters a hospital a medical scholar, he emerges from its doors a physician.

Lastly, the reporter proposes that some uniform system of examining candidates for admission into the ranks of the profession, should be adopted in all the states of the Union in addition to the collegiate examination for degrees, and declares his belief that such a scheme is feasible, and would be attended with the most salutary results.

To give any power to this extra collegiate examination, there must first be some legal penalty for declining to come before its presence, or refusing to submit to its authority. This requires legislative interference in a matter with which our legislators are little disposed to meddle. Every man in our country considers that he has the right to select his own way of dying, and the attempt to drive him into the

arms of scientific physicians, and expel beyond the borders of the state all except the properly educated and legally examined medical man, would be resisted *en masse* by the community.

These are difficulties which the reporter glances at but casually. We think them insurmountable; but grant for a moment that this legislation could be obtained; imagine that the bill is on its last reading, and only waiting for the insertion of the appointing power of such a board. How would the learned reporter have his examining board elected? By the governor, or the legislature? Then politics would rule the day, and instead of the learned man we might have the know nothing. Shall the profession appoint this powerful body, who are to reign despotically over the whole state? How are they to control the subject?—through the medical society of Virginia, whose annual meetings are passed over with silent contempt, "and none so poor to do it reverence?" The able reporter who proposes this project would hesitate long before he would confide such power into the hands of an irresponsible quorum of twenty; and the society, whose contributions to science for thirty years past might be held in a nutshell, could hardly hold the reins which would guide the medical profession of Virginia.

We have dwelt longer on this subject than we intended, and will close by remarking that, although differing with the distinguished reporter on the feasibility of some of his propositions, we beg leave to declare our deep respect for the earnest zeal and admirable temper which marks his paper. We feel that if the profession has many such in its ranks, the time is not far distant when it will throw off many of the evils here so truthfully described, and assume the high position to which it is justly entitled.

IV. *Dictionary of Medical Terminology, Dental Surgery and the Collateral Sciences.* By CHAPIN A. HARRIS, M. D., D. D. S. Second Edition. Philadelphia: Lindsay & Blakiston. (From A. Morris.)

From the coarse tooth puller who had his office at a blacksmith's shop, to the well educated gentleman who now presides over the luxurious suite of apartments devoted to the practice of dental surgery, the transition is wonderfully great. So rapid has this transformation occurred, that even yet we may find some relics of the olden time, and still behold the village blacksmith triumphantly mangling the jaw of some unfortunate, whilst all the idlers stand around in respectful silence. But now what a contrast; the room so charming and snug, the chair a specimen of great ingenuity, and the basin a very model of beauty and grace; the rusty iron forceps are now inlaid with mother of pearl; the instruments of torture repose quietly on crimson velvet, and the shriek of pain which once rung on the ear, is stifled effectually under the magic influence of chloroform.

These are pleasant thoughts. It is very agreeable to think, that instead of the mumbling old age which stared our ancestors in the face, we can now look forward to a set of teeth so white and pearly, and withal so usefully adapted to the purpose, that one almost sighs for the time when his decayed and broken fangs are heard of no more, and their porcelain successors reign in their stead.

This wonderful result has been accomplished only by great and long continued effort, and we believe that there has been more activity displayed in the study and improvement of the art of dentistry, than can be found in any of its kindred sciences. Flourishing schools and learned professors now teach what is truly a science, and this specialty has become the most profitable branch of the healing art.

The work before us is a strong verification of our statements. Its author, Dr. Harris, is the professor of the principles of dental surgery in the Baltimore college, a member of the American medical association, and a well known and successful writer of various works appertaining to his profession. This Dictionary includes, not only the technicalities attached to dentistry, but all those to be met with in the whole science of medicine itself. It is beautifully printed by Messrs. Lindsay & Blakiston, and is alike creditable to the author and publishers.

V. *Diseases and Injuries of Seamen, with Remarks on their Enlistment, Naval Hygiene and the Duties of Medical Officers.* By G. R. B. HORNER, M. D., Surgeon in the United States Navy. Philadelphia: Lippincott, Grambo & Co.

We have here the experience of an old medical *Salt* upon various subjects appertaining to the health and good condition of a man-of-war. He discusses the method of examination on the admission of seamen into the navy, and devotes a chapter to the duties of medical officers, all of which may be of some use to those who design entering into that branch of the service.

We do not think that nature ever designed Dr. Horner for an author. For although he evidently has a great deal of knowledge with regard to the subjects treated of, and is withal a practical, sensible gentleman, yet his style unfortunately is singularly cloudy, and he has an odd way of running off at a tangent, which is not a little perplexing. We commenced his book with a courageous heart, but in the middle of the second paragraph, which by the bye is four and a half pages in length, we found ourselves like one in a canebrake, fighting manfully for our breath and looking about with bewilderment for some way of escape.

The book is garnished with plates delineating fractured legs set with Dessault's splints, lacerated feet, and other such common place occurrences. The only information we derived from these engravings was,

that Jack Tar loves his tobacco just as much in the "Sick bay" as he does everywhere else, for each invalid is seen comfortably stowed away in his hammock, with his spittoon by his side—a delicate attention which we rather admire.

VI. *The Law of Human Progress, or the Science of the Mind.* By JAMES C. HALSALL, Charlottesville, Va.

This little work, although bearing upon subjects not strictly speaking within our province, has something in it worthy of attention. Its author, in the quiet retirement of a village life, has worked out for himself a theory which is ingenious and plausible, if not true.

The object of the book is to shew that the human mind advances to higher and higher efforts as generations are born and die, as centuries roll on; that each step upwards when gained is never entirely lost, but leads to still greater progress in the future. Each flight is to a higher, more ethereal atmosphere than the one left behind; and whatever delay may occur in this progressive movement, yet when the movement does take place, its direction is ever to sublime realms and more daring exploits.

The author in a not unpleasant manner, adduces many arguments drawn from past events to prove the truth of his theory, and there are suggestions scattered through its pages which justify us in giving it this passing notice.

EDITORIAL AND MISCELLANEOUS.

The Medical Department of the University of Virginia.

It has been one of the leading objects of this Journal, from its commencement, to urge upon the Virginia medical student the positive duty which devolves upon him to exhaust all the advantages which his own state affords him in the prosecution of his studies, before he leaves her confines to throng the lecture rooms and fill the exchequers of northern colleges. We have maintained that so long as our students are sent from home to obtain their educations, thereby tacitly confessing our own inability to teach them, just so long will the public place us in the

inferior position we have ourselves chosen to assume, and we will continue to see the long lines of invalids going up to the Bethesdas of Philadelphia and New York, in search of that scientific treatment or surgical aid not to be obtained at home.

We consider it still more the duty of the profession and the student to foster our own state institutions, to build up her colleges and support her professors, because Virginia has done much to advance the cause of medical education. We will go farther, and declare that we consider that Virginia has founded a medical school, now in successful operation, which has always been, and is now, *the best medical school in America.* If there was no feeling of state pride to actuate us, if there was no love of our native land to govern us, we would, from the honest belief that we were seeking his best interests, desire every man intending to join the medical profession to become a pupil of the medical department of the University of Virginia.

By calling attention to the distinctive features of this institution, we can easily demonstrate the truth of our statement.

It unites the advantages of lectures and instruction by the use of text books. For while successive portions of the most approved manuals are assigned for each recitation, the teacher also delivers a discourse, prepared with continual reference to the text, explaining its obscurities, correcting its errors, enforcing the views or facts of special importance that it contains, and incorporating the contributions of more recent writers.

The length of the session enables the number of daily lectures to be reduced to two, and as, consequently, few studies are carried on concurrently, the sequence of them may be adjusted in their natural order, and the teacher released from the necessity of assuming that his class bring to the comprehension of his theme knowledge imparted by his colleagues at a subsequent period of their course—from the necessity of attempting, for example, to recount the actions that an organ performs, the purposes which it subserves, or the diseases of which it is susceptible, before his audience are acquainted with its structure.

A mastery of the subject of each lecture is enforced by a searching recitation, which has the incidental advantage of indicating to the professor the topics in whose exposition he had been least successful, and affording him an opportunity of elaborating them anew.

As the curriculum lacks the important and attractive element of clinical instruction, the teacher strives to compensate for the defect by

devoting unusual attention to the collateral sciences that furnish the foundation on which medicine reposes, or adorn its superstructure.

By virtue of its position in a University, the students are often induced to combine with their strictly professional pursuits the various learning and refining culture of academic study.

The discipline and drilling to which they have been subjected throughout the session, justify the professor in requiring and enables the candidates for honors to reach a remarkably high standard of attainment.

The want of clinical advantages is the great defect of the University medical school, and hence the state has erected in her metropolis "The Medical College of Virginia." This institution we earnestly hope will give all the opportunities for practical medicine, so necessary to constitute a thorough medical education. It already has a well arranged infirmary, and we have reason to hope that a proposition to endow a "State Free Hospital" will be favourably entertained by our legislature. Our curriculum would then be complete, and when the student has passed safely through the searching ordeal of a University examination, and availed himself of all the practical teachings and hospital advantages to be derived from a residence in this city, he may feel a becoming pride in styling himself "Doctor of Medicine" by virtue of a Virginia diploma.

Dr. Séquard.

The numerous friends of this gentleman will be pleased to see, from the accompanying letter, that he has arrived in this country, and assumed the physiological chair in the Medical College of Virginia. His continued investigations, with regard to the functions of the pneumogastric nerves, have afforded results which are now, for the first time, presented to the public:

RICHMOND, January 21st, 1855.

DEAR DOCTOR:

Will you have the kindness to give room to the following lines in the next number of your Journal?

I wish to *take date* of the discovery of two important facts relative to the physiology of the pneumo-gastric nerves.

I had already found and published that these nerves are the motor nerves of the vessels of the heart; I have since found that they are also the principal (if not the only) motor nerves of the small vessels of the lungs. This view is grounded on the following facts:

1st. The section of the pneumo-gastric nerves, in the cervical region, is followed by the dilatation (or paralysis) of the small vessels of the lungs, as well as it is by the dilatation of the vessels of the heart.

2d. The galvanisation of these nerves in the cervical region, after they have been carefully separated from the sympathetic, produces the contraction of the vessels of the lungs, as well as that of the vessels of the heart.

I will prove elsewhere that the dilatation of both the vessels of the lungs and those of the heart, which follows the section of the pneumo-gastric nerves, is the first and principal cause of the death which is the constant result of this operation.

Yours, very cordially,

E. BROWN-SÉQUARD, M. D.,
Prof. Inst. Med. etc. in the Med. Col. of Va.

Dr. McCaw.

The Case of Miss Weaver.

The attention of the profession has been called by the medical and political journals, to a surgical operation at the Albany hospital, the unfortunate result of which was attributed to the effects of ether and chloroform.

From the following facts, kindly communicated by Dr. Alden March, the eminent surgeon who practiced the operation referred to, it will be seen that this supposition was entirely erroneous:—

Miss S. Weaver, æt. 8, of Galopville, N. Y., was brought to the Albany hospital in the latter part of December last, with what appeared to be a glandular tumour of the neck, extending from behind the middle of the left ear to the sternal extremity of the clavicle, and projecting laterally five or six inches.

The tumour was first observed in February, 1854; it enlarged steadily until about the first of October, after which its growth was very rapid. It was movable, and apparently circumscribed and superficial.

On the 21st of December, Dr. March assisted by Dr. Ormsby and others, proceeded to extirpate the tumour.

The external surface of the tumour was carefully exposed, the assistants compressing the superficial veins descending towards the chest; the operation then proceeded to the base of the morbid mass, separating its attachments with the fingers, wherever this was possible. It was presently discovered that it was impracticable to complete this stage of the operation without implicating important bloodvessels. The common carotid passed through the tumour, and nearly two inches of the trunk of the internal jugular was imbedded in its substance. A ligature was placed on the artery, and the veins were compressed: the dissection was then completed. The operation lasted half an hour, it having been necessary to suspend the manipulations once or twice, in order to combat the symptoms of prostration which arose from the loss of blood in part, from shock, and probably from the introduction of air into the venous system (?).

The patient died in two hours after the completion of the operation.

We have designedly omitted in the above description any mention of the effects of the anæsthetic agents which, it has been asserted, caused the fatal termination of the case. Of their influence on the patient, a writer in the Boston Medical Journal speaks as follows:—"Ether was administered,—she appeared to sink, when stimulants were at once given, which had the desired effect. When she had recovered, more ether was given, and Dr. March proceeded to the operation. From *the stupefaction produced by the ether she never recovered*, but died in a short time," &c.

So far was this from having been the case, that, as Dr. March writes us, "the truth is, the patient was scarcely affected by the ether at all, much less rendered insensible. After using sulphuric ether for ten or twelve minutes, without rendering her in the least unconscious, a good article of chloroform, which was procured by Prof. Townsend in Paris, was used twice or three times in about half-drachm doses. No *ether* was employed after the chloroform; nor was chloroform used after the patient 'appeared to sink.'" Dr. March adds that he believes that "none of the surgeons who aided in the operation thought that the ether or chloroform administered in the case had anything to do in causing the death of the patient."

At the present juncture, when the public attention is painfully awakened to the dangers attending the use of anæsthetic agents, and efforts to proscribe them are being made by those who perceive their disadvantages too forcibly and shut their eyes to their benefits, it is very undesirable that their dangers should be exaggerated, or that disasters should

be laid to their charge to which they are not legitimately entitled. It is this consideration which has induced us to bestow so much space to the details of the case of Miss Weaver. O.

The Revue Médicale and the Debate on Cancer.

The sparkling criticism of the *Revue Médicale*, on the cancer debate before the Academy, (which is here so happily rendered by our corresponding editor) is a worthy pendant to the noble speech of Velpeau in defence of clinical medicine, a brief abstract of which was published in a late number of this Journal.*

"Let us turn a critical eye," says M. Sales Girons, (disciple of M. Cayol, and editor of the organ of the Vitalists) "on that famous debate in which the School of Paris, in formal session at the Academy of Medicine, is demolishing that great edifice which cost it forty years of labour. Anatomism, like Saturn and the Revolution, is at last devouring its own children.

Ninety-nine in a hundred of those who read the narrative of the present academic war, will see in it a simple scientific discussion, rather bitter it is true, about tumours in general, and the incurability of cancer in particular.

But the subject of tumours is only the pretext, the incurability of cancer only the outside noise of the conflict. The eternal truths of medicine are in question, and the fathers of the Anatomical School, represented by M. Velpeau, are vainly attempting to arrest the torrent which they themselves set in motion, not foreseeing whither it would lead.

When we look beneath the surface of the debate which agitates the Academy, we find the *Microscope* and the *Clinic* in mortal combat.

The microscope, an amplification of the much-vaunted scalpel, represents *matter*.

The clinic, scoffed at and disdained by the anatomo-pathologist, represents observation, *coup d'eil*, experience, and medical tact and genius.

The microscope is the despotic instrument; the clinic is the intelligence which reasons.

The microscope is the *fact*, the clinic is the *science*.

The microscope is —— is the utter negation of medicine; the clinic is its supreme affirmation.

And yet the microscope is the very culmination, *le derniere mot* of anatomism; judge, then, anatomism. We are constantly asked to demonstrate the practical utility of sound doctrine; wait a while and look at the natural consequences of a vicious system.

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* Vol. IV., No. I., p. 60.

Practitioners who have grown grey by the bed-side, physicians and surgeons who have earned a right to form a diagnosis, what are you thinking of? Of cancer.—Why, send a piece of the tumour to a micrographer in vogue, and by return mail you will have a ready made diagnostic, and the best prognosis the market affords.

But cancer is only the beginning; soon we shall be required to obtain the micrographer's assent to our diagnosis of phthisis; unless the sputa he inspects contains tuberculous matter our observations will be valueless; and then his domain will be extended to all morbid alterations, all normal and abnormal secretions, until medicine becomes the tributary of the microscope, the physician the servant of the micrographer.

The anatomo-pathologists decreed that matter should teach mind, that fact should predominate over science, that the senses should control the perception; here is the last step of the system,—the instrument has replaced the understanding! *patere legem quam fecisti.*

This is the true meaning of the final scene which is now being enacted at the Academy of medicine. I say *final*, because the old or scalpel anatomists, and the young or microscope anatomists are engaged in mutual annihilation. We see the fathers struggling to avoid the abyss which they dug themselves to lay the foundations of their system, and we hear their cries.

The clinic, they exclaim through the mouth of M. Velpeau, leave us the clinic, which after all will answer for medicine and the physician. When I patronized the microscope twenty years ago, adds M. Velpeau in his own name, I was far from suspecting the pretensions which it would set up; I renounce the microscope, its pomps and vanities!

—— But admit, interrupts the microscope, that I possess the cancer cell, and consequently the diagnosis of cancer?

—— I will not admit that even, I will rather deny it, replies M. Velpeau.

—— And M. Velpeau is right; he knows the story of that child with innate diplomacy who refused to say A because he knew that afterwards he would be made to say B, and then the whole alphabet.

—— Grant us at least, resumes the microscope, the incurability of cancer?

—— Not I, says M. Velpeau, cancer is curable, I have my hand full of examples to prove it.

—— But you teach, the devil take it, urges the microscope, the pathological localization of cancer?

—— Heaven preserve me from such a doctrine, responds M. Velpeau; cancer is a diathesis, a dyscrasy, a cachexy; cancer is in the blood before it is in the breast. Cancer, interrupts M. Jules Cloquet in his place, Antoine Dubois was right about it, it is in the nervous system! (*Loud and prolonged applause from the fathers of Anatomism.*)

—— But this is the ruin of your system, cries the microscope, you are

in flagrant contradiction with the principles of the celebrated school which admires you as one of its most illustrious representatives.

—— That is possible, rejoins M. Velpeau, the contradiction is my affair; I would do yet more in order to have nothing in common with you, who would destroy medicine with your radicalism. If the microscope is the termination of Anatomism, let it go, let it have its last judgment. *Selvet sæclum in favilla!*

With the aid of this little commentary, the reader will discover the true meaning of the antagonism in this academic debate. On the one hand he will perceive the microscope, respectfully aggressive; on the other clinical medicine, defended by an army of veterans, courageous rather than consistent. The micrographers are striving to maintain: 1st, the monopoly of diagnosis; 2d, the incurability of cancer; 3d, the localization of the cancerous tumour, an anatomical triad, which is a triple negation of medicine. The founders of anatomism are denying anatomical diagnosis, incurability and localization, and defending clinical observation.

And we may predict the result of the battle; the microphiles will be beaten; anatomism will be demolished, and true medicine, re-established on the ruins of a half century, will point to the conversion of M. Velpeau with more pride than to the ninety-and-nine faithful, who have adhered to her throughout the era of systems.

And will the microscope be lost? Certainly not; but clinical medicine will assign it its true place, making it subservient to order and truth; under the reign of anatomism, it could only be an instrument of anarchy."—*Extract from an Editorial of Dr. Sales-Girons*, Rev. Med. Nov. 15, 1854.

Biographical Sketch of Dr. John Mitchell.

Among the many eminent physicians who adorned the Virginia profession in the "olden time," there is none better worthy of our remembrance than the subject of this sketch. The friend and correspondent of Franklin; the original and profound thinker and author; the learned botanist and successful practitioner; Dr. John Mitchell, well deserves a place amongst those old worthies whose long forgotten names we have endeavoured to revive.

John Mitchell, M. D., F. R. S., a distinguished physician and botanist, came from England to this country about the year 1700, and settled in Virginia at the small town of Urbanna, situated on the Rappahannock. While he was occupied in an extensive practice, he spent considerable time in the cultivation of botany, and wrote a useful work on the general principles of the science, containing descriptions of several new genera of plants,

which was published in 1769. In 1743 he wrote an interesting and original essay on the causes of the different colors of people of different climates, which was published in the Philosophical Transactions. He attributes the difference of complexion in the human species to the influence of climate and the modes of life; and thinks that the whites have degenerated more from the original complexion of Noah and his family, than the Indians, or even Negroes. The colour of the descendants of Ham, he considers a blessing rather than a curse, as without it they could not well inhabit Africa. His principles were afterwards adopted by President Smith, of Princeton College, New Jersey, who wrote a more extended essay on the subject.

He wrote various other essays, which were published in the Philosophical Transactions, and which did him great credit as a man of genius and observation; but his most valuable production, perhaps, is a paper which he drew up on yellow fever as it appeared in Virginia in 1737, 1741 and 1742. This paper, left by him in manuscript, fell into the hands of Dr. Franklin, who communicated it to Dr. Rush. Dr. Rush not only read the essay with interest, but acknowledges that he derived from it hints which assisted him in detecting the true nature and method of treating the yellow fever, as it appeared in Philadelphia in 1793. Few physicians who have livid in our country, have been more justly celebrated for originality of genius and accuracy of observation, than Dr. Mitchell. He lived to practice his profession nearly fifty years in Virginia. The series of highly interesting papers above mentioned, including the account of yellow fever written in 1744 by Dr. Mitchell, with a reply of Dr. Colden of New York to Dr. M., and a subsequent letter of Dr. Mitchell on the same subject, were placed in the hands of Dr. Hosack by the late Professor Rush, a short time previous to his death, with the intention of their being published in the American Medical and Philosophical Register. These, with additional observations on the yellow fever of Virginia, addressed to Dr. Franklin by Dr. Mitchell in 1745, may be found in the fourth volume of that work. Few papers, it is believed, will be read with more interest, particularly when it is considered how extremely important Dr. Rush viewed them, as affording him new facts respecting the nature of the same epidemic at the time it prevailed in Philadelphia in 1793.—*Thacher's American Medical Biography.*

Medical Practice Among the Poor.

I trust that I shall not be thought wanting in humanity, if I suggest in this paper little more than a business view of the relations that subsist between the sick poor and the main body of the doctors. Mr. Souchong, who supplies tea to the poor in ounce packets at an enhanced price, and not always in the state in which it left China; Mr. Sirloin, who sells them the chips and fragments of his meat at a good profit; Mr. Wick, who gets the

half penny out of the poor man's penny candle, may hold up their hands at the hardheartedness of an apothecary who meanly connects thoughts of the sick poor with thoughts of his own day-book and ledger. Be it so. Many a night, when Mr. Souchong was snoring soundly with his cash-box on the chair at his bedside, I and thousands of my brethren, in town cellars and garrets, or in country cottages by lonely hill-sides, have sat sleepless by the bed of a poor man or woman tossing with pain, have had our hands grasped firmly by sufferers who held to us as to dear life; and forgetting our own weariness, have laboured to be strong in help, and strong in sympathy, to cheer the downcast, and to comfort those that mourned. Of course we are hardhearted. Mr. Souchong, who happens to be a poor law guardian, and who knows it, says so.

The profession looks to an undiscerning public for patronage which is much too unwisely and unequally distributed. It is full of struggling men whose competition with each other would be fierce if it were not restrained by gentlemanly feeling, and a rigid code of etiquette. In such a profession jealousies and morbid sensitiveness must—as they surely do—exist. The folly of the ignorant among the public opens many a profitable path to meanness. Worldly advantages are offered most freely to all medical men who will be humbugs. Some surely must be too weak to withstand temptation of this kind; and, indeed, it is well known that so far as we could do so with honour we have all sought to satisfy the public by including a very considerable mass of humbug in the routine of our daily practice. We are not to blame for this, any more than we are to blame for the heartburnings that arise among ourselves out of the general impoverished state of the profession; called upon as it is to give its services gratuitously to three-fourths of the population of the country. We accept cheerfully, I say again, that last mentioned necessity; but it is not requisite that we should work, as we so generally do work, unthanked.

Apart from a sense of duty done, the sole profit that a medical man gets out of attendance on the sick poor, is experience. But he gets that out of the sick rich who pay him for his cares; yet he is content to take it as his only profit from the poor. His need of experience is great. He requires it first in hospitals; in which poor men, women or children are collected for gratuitous treatment by the foremost men of the profession; who in that way bear their share of the general burden (no payment being attached to hospital appointments); and, at the same time, impart much of their own practical knowledge to their juniors. Then the juniors, when they have received their diplomas, begin practice by the acquisition of some more experience among the poor; and, with that view, seek small salaried positions as house surgeons in provincial infirmaries, or as assistants—doers of the parish work—in the pay of established surgeons.

These are the young men entitled whippersnappers; to whom the poor

are said, by Messieurs Souchong, Sirloin, and Wick, to be shamefully and neglectfully handed over. Mr. Souchong, Sirloin, and their friends refuse on their own parts to take counsel of a whippersnapper; so do their betters with considerable unanimity. They wait till he has more experience; that is to say, until he has tried his 'prentice hand sufficiently among the poor. He would be happy enough to attend viscounts and bankers; but he is bidden by society to try his hand first among beggars. He does so in all good faith and earnestness; whereupon cries virtuous society, it is a shame to intrust to whippersnappers poor men's lives! Now, I believe that, as the world of physic goes, the poor are not in this respect much to be pitied; and that on the whole, they perhaps get more true help in the way of medical attendance than several of the classes next above them; including nearly all the poorer half of what are called the middle classes. The poor man in any town, if dangerously ill, may go into a hospital, where he not only gets the help of such professional advice as, except himself, only the wealthy can afford to summon to their cases, but he gets the advice carried out for him by a system of skilled watching and tending such as many a duke is unable to secure. In every town, almost every surgeon or physician famous for his skill in treating any given form of disease, sits at some hospital or dispensary at certain hours, to prescribe gratuitously for the poor who come to him; securing himself the opportunity of watching and comparing a great number of cases, and on the other hand, giving to the poor, opportunities that very seldom can be compassed by a tradesman's purse. Even the out-door visiting by whippersnappers is rather a gain to the sick poor than not. The young practitioner, fresh from his studies and his hospital training, has not, indeed, independent experience; but he has the best and latest knowledge fresh in his head, and the experience of first-rate practice that he has been witnessing, still at his fingers' ends. This is not the case with men in active practice, who cannot keep pace with the growth of scientific knowledge in their own profession. Thus the whippersnapper may know more than the old established man; whose very success makes him a man of routine and leaves him no time for study. Perhaps, however, this youth is a fool who has lost time and misused his opportunities. Granted. Perhaps the old man, too, was such a fool in his youth; and, if he was, assuredly he never had it in his power afterwards to conquer the ignorance with which he started. He has learned only to hide it; to find a substitute for knowledge sometimes in assumption—sometimes in gruffness or some assumed eccentricity of manner. But the young fool who, distrusting himself, is not bound by any delicacies of position to abstain from seeking information of his seniors, is a much safer counsellor to a poor man—or even to a rich man—than the old fool who is pledged to maintain a character for wisdom.—*Household Words.*

VARIETIES.

"PUNCH ON QUACKERY."—Much amusement has been caused in hospital libraries by a witty but sensible article in *Punch* on the all-absorbing question of quacks and quackery. "A hand-bill has been forwarded to Mr. *Punch*, containing a rather choice specimen," he says, "of the lies with which the quack medicine-mongers endeavoured to improve the sale of their pernicious trash. It sets forth that an Indian captain's little girl, aged eight, was in such a state of disease, from dropsy, that she was given over by the doctors. Her face 'a mass of complete ulceration;' her teeth were so clenched that her affectionate father had to wrench her mouth open 'with a wedge,' in order 'to force down a dozen pills No. 2.' The very next day she got up, dressed herself after the pills, and was 'discovered sitting on a hard form before a plate of ham and beef.' The rubbish," says *Punch*, "which the bill in question is intended to puff, is sold, more shame to Mr. Gladstone, under a Government stamp. Government is not ashamed, for a consideration, to lend its influence to the quack. Some evening the Government, however, will be compelled to break up its partnership. In the very handbill to which we allude, and folded round the medicine, the Indian captain is made to say, 'I attribute all my ailings, weakness and diseases to having been bled once, and been *vaccinated*.' Under the stamp of the same Government," says *Punch*, "which introduced the Compulsory Vaccination Act, most properly enforced under Lord Palmerston's direction, is circulating a notice, that all a person's ailings, weakness and diseases may be attributed to vaccination? Are the people to consider, then, the Government lancet their bane —Gladstone's pill-box their antidote? We do think at least one thing—they have a right to complain of what Mrs. Partington would call the vaccinating policy of the Government.

PHYSIC AND MUSIC.—Every one knows that Esculapius was the son of Apollo, and this relationship accounts for the frequency with which we find good physicians to be good musicians also. Our annals are rich in distinguished doctors, who have had excellent voices, or who played with skill on various instruments. Boerhaave was a capital performer on the flute; and it is a curious coincidence that the late great toxicologist of France, and the eminent living toxicologist of Great Britain, should have both possessed splendid bass voices. The editor of the *Union Medicale* comments on the number of musical confreres he meets with in the salons of Paris (Janvier 14); and we can assure him that in Edinburgh the same thing is observable. Indeed, most of our public professional dinners and entertainments would now be considered dull affairs, without the songs and glees with which they are enlivened by the Medical Glee Club of this city — *Ed. Med. Journal.*

THE

VIRGINIA

MEDICAL AND SURGICAL JOURNAL.

MARCH 1855.

ART. I.—*Experimental and Clinical Researches on the Physiology and Pathology of the Spinal Cord, and some other parts of the Nervous Centres.* By E. BROWN-SÉQUARD, M. D., of Paris, Professor of the Institutes of Medicine and of Medical Jurisprudence in the Medical College of Virginia, Laureate of the Institut de France (Académie des Sciences), Ex-Secretary of the Société Philomatique, and of the Société de Biologie, of Paris, etc.

If physicians knew how much the practice of medicine and surgery, as well as the science of physiology, may progress from researches made on living animals, that is from *vivisections*, I have no doubt that many would enter in this field of enquiry, and that they would be soon repaid for the trouble of experimenting, by making important discoveries.

It is from experiments on living animals that Dr. Jobert, de Lamballe, Prof. S. Gross, and some other surgeons have deduced the principles of treatment of wounds of the bowels; it is in experimenting on animals that Amussat has discovered the torsion of arteries, which every day proves so useful in man; it is by researches made on living animals that Prof. D. Brainard has discovered many of the important surgical facts that are related in his admirable Prize Essay. I might point out many other striking proofs of the usefulness of vivisections, but I think that my readers may themselves find these proofs if they

will examine what has been done lately about diabetes, albuminuria, eclampsia, epilepsy, the diseases of the pancreas, the effects of poisons and the treatment of poisoning, etc. They will find in this examination what a wonderful progress there has been in all these parts of medical science, coming from experiments made on living animals.

Not only is it easy to make discoveries in performing such experiments, but the number of discoveries to be made after a single experiment may be extremely considerable, as will be seen hereafter.

Before entering into the details of this paper, I think proper to say that when I speak of a complete transversal section of a lateral half of the spinal cord, I, of course, mean a transversal division of all the elements of this half, *i. e.*, the gray matter and the three white columns: the anterior, the lateral, and the posterior.

Part I.

Researches on the place where the sensitive and motor nerve-fibres make their decussation in the nervous centres.

In the actual state of science the explanation of the fact that an alteration, in one side of the brain, produces a loss or a diminution of sensibility and of voluntary movements, on the opposite side of the body, is that the motor and sensitive nerve-fibres go up to the encephalon, along the spinal cord, without having any decussation, and that, when they have arrived at the medulla oblongata, they begin to decussate, and they continue do so all along the middle line of what is now called the *Isthmus of the Encephalon* (medulla oblongata, Pons Varolii, Crura Cerebri, Corpora Quadrigemina, etc.).

I will try to prove: 1st. That this view is entirely erroneous; 2d. That the sensitive nerve-fibres make their crossing almost exclusively in the spinal cord; 3d. That the voluntary motor fibres decussate mostly in the inferior part of the medulla oblongata.

§ I. *Effects of the section of a lateral half of the spinal marrow on sensibility.*

Until lately, some experiments made by Galen had been generally considered as proving that there is no *crossing* of action in the spinal cord. My experiments on animals, and some pathological facts I have collected, are partly opposed to the view attributed to Galen. I have found that if it is true that almost all the motor nerve-fibres do not cross each other in the spinal cord, it is quite the reverse for the sensitive nerve-fibres, so that if an alteration of the *right* side of the spinal

cord exists, it produces a loss or a diminution of voluntary movements on the right side of the body, and a loss or a diminution of sensibility on the *left* side, and *vice versa*.

There is in reality no great difference between the results of my experiments and those of Galen's experiments, as far as we know what they were. Galen, as the reader may ascertain,* speaks of the paralysis of voluntary movements, but he does not say a single word about sensibility. And it is, nevertheless, upon the falsely understood results of Galen's experiments that, for a great many centuries and even until the last few years, physicians have based the universally admitted opinion that there is no crossing of action in the spinal cord, neither for sensibility nor for voluntary movements!

The facts which I have found and which prove that there is a crossing of action for sensibility in this nervous centre, are the following:

1st. If a lateral half of the spinal cord is divided transversely at the level of the tenth costal vertebra, on a Mammal, it is found that sensibility is much diminished and, in some cases, entirely abolished in the posterior limb opposite to the side of the section. On the contrary, the sensibility, far from being lost, appears to be much increased, in the posterior limb, on the side where the section has been made.

2d. If, instead of one transversal hemisection of the cord, two, three or some more are made, on the same side, the same effects are observed.

3d. If, instead of mere sections, a removal of a lateral half of the spinal marrow is effected, the same results are still obtained. For the performance of this experiment a longitudinal section, one inch in length, is first made in the median plane of the cord, and then two transversal sections on one side are made at the extremities of the longitudinal one, so that a part of the cord is completely separated from the rest and removed.

4th. If the lateral section is not complete, and if the part left undivided is in the neighborhood of the centre of the cord, it is found that sensibility appears to be increased in the posterior limb on the same side, and that in the other posterior limb there is only a slight diminution of sensibility. If the part left undivided is considerable, sensibility does not appear to be diminished in this last limb, and sometimes it seems rather increased.

* See his following works: De locis affectis, Lib. iii, cap. xiv, and De anatomicis administrationibus, Lib. viii., sect. 6.

5th. If, in performing the section of a lateral half of the spinal cord, the instrument goes a little too far and divides also a small portion of the other half in the central part, then the posterior limb on the side of the complete section is less sensitive than in the normal state, and the posterior limb of the opposite side loses completely its sensibility.

6th. If the section of a lateral half of the spinal cord is made at the level of the second or third cervical vertebra, it is found that sensibility becomes very quickly much greater in the parts of the body on the side of the section, and that, on the contrary, the parts on the other side become evidently less sensitive.

Before proceeding farther in the exposition of my experiments, I think necessary to examine here the results already related. It is clear that if the transmission of sensitive impressions were operated in the spinal cord, according to the generally admitted theory, we should find, after the section of a lateral half, sensibility lost or at least diminished on the corresponding side of the body and almost normal on the other side. It is exactly the reverse that we find: the side which should have lost its sensibility does not lose it at all,* and the one which should have kept its sensibility loses it almost entirely.

I conclude that the generally accepted theory is wrong, and that there appears to be a crossing of action for sensibility in the spinal cord. The following experiments are still more decisive proofs that this is the real state of things.

7th. If after a section of a lateral half of the spinal cord at the level of the eleventh costal vertebra, we perform the section of the other lateral half, at the level of the sixth costal vertebra, so that the two lateral halves of the cord are cut transversely, we find that sensibility is entirely lost, or very nearly so, in the two posterior limbs. Sometimes a very slight degree of sensibility remains, more particularly in the posterior limb on the side where the spinal cord has been divided at the level of the sixth costal vertebra.

8th. If two sections of lateral halves are made as in the preceding experiment, but at a greater distance, one from the other, for instance, one on the right side, at the level of the eleventh costal verte-

* Far from being lost, sensibility appears, as I have already said, to be much increased. This hyperœsthesia is a very curious fact, of which I will speak in another part of this paper.

bra, and the other on the left side, in the cervical region, nearly the same results are obtained as regards the posterior limbs, but the sensibility is increased in the right anterior limb and it remains, though much diminished, in the left anterior limb.

9th. If, after having divided transversely a lateral half of the spinal cord, in the neck, at the level of the roots of the second pair of nerves, we lay bare the very sensitive nerves going to the ear, in dogs or rabbits, we find that their sensibility, on the side of the section of the cord, appears increased, and that, on the contrary, on the other side, they appear either destitute of sensibility or very slightly sensitive.

10th. Sections of a lateral half of the medulla oblongata give, as regards sensibility, the same results as sections of a lateral half of the spinal cord.

11th. If a longitudinal section be made on the part of the spinal cord giving nerves to the posterior extremities, so as to divide that part into two lateral halves, then it is found that sensibility is completely lost in the two posterior limbs, although voluntary movements take place in them. This is one of the experiments of Galen, but I repeat that he does not speak of sensibility.

12th. If a similar separation of the two lateral halves of the spinal cord be made on the whole part supplying nerves to the anterior limbs, then we find that sensibility is lost in both these limbs, and that it is only slightly diminished in the posterior limbs.

13th. If the same operation be made as in the preceding experiment, and if afterwards a transversal division be made on one of the lateral halves of the cord in the part where the longitudinal section has been performed, then we find that the posterior limb on the side of the transversal section remains sensitive, and that the other posterior limb loses its sensibility.

I do not think necessary to stop to show that these experiments are all in accordance, to prove that the transmission of sensitive impressions made on one side of the body takes place, at least for a great part, along the opposite side of the spinal cord, and that there is, consequently, a crossing of the sensitive nerve-fibres in the spinal cord.

My experiments have been made on animals belonging to many different species, and particularly on dogs, cats, sheep, Guinea pigs, rabbits, marmots, etc. Many of these experiments have been witnessed by Messrs. Rayer, Flourens, Magendie, Lallemand, Duméril, Cl. Bernard,

Ch. Robin, and the Academy of Sciences of Paris has given me a reward of three hundred dollars for some of these researches.

To ascertain the degree of sensibility in my experiments, I have employed various modes of excitation: mechanical, galvanic, physical, (*i. e.*, warmth and cold) and chemical.

A proper use of galvanism and of a red hot iron are the best means of ascertaining the presence and the degree of sensibility. When a slight galvanic current is employed, it gives no pain if applied to limbs in which sensibility is much diminished. In making use alternately of galvanic currents of different energies, we are enabled to find what is the degree of sensibility of the different parts of the body.

I have never judged of the degree of sensibility of a limb by its movements when I irritated its skin, because these movements might have been merely *reflex*. My means of judging have been the shrieks of the animals and the movements of their ears, their faces and their necks.

I have constantly compared the degree of sensibility of the parts of the body situated behind the injured part of the spinal cord, with the sensibility of the anterior parts of the body and particularly of the face. By so doing, it is possible to ascertain the changes of sensibility resulting from the operation on the spinal cord.

The following example will show how we may appreciate the degree of sensibility. The lateral half of the spinal cord having been divided transversely on a dog, at the level of the 10th costal vertebra, I apply a galvanic excitation of moderate intensity on the face, and the animal shrieks a little and moves its head and tries to get away.

The dog is left quiet for some time, and then I apply the same galvanic excitation on the posterior limb, on the side of the section, and the animal shrieks a little more than in the preceding case and it tries more decidedly to get away. Now, after it has become quiet again, the same current is applied to the posterior limb, on the opposite side, and there are no shrieks and no attempts to go away. The dog appears not to feel this excitation.

Sometimes I ascertained the degree of sensibility by a totally different means: I gave chloroform to animals having had a lateral half of the spinal cord divided in the cervical region, and I found that the slight sensibility existing in the limbs, on the side opposite to the section, disappeared almost at once, and that, on the contrary, a relatively long time passed before the production of a complete anæsthesia in the

limbs on the side of the section. Generally anæsthesia appeared in the face before appearing in these last limbs.

There cannot be, I think, any doubt that my experiments prove that there is a crossing of sensitive nerve-fibres in the spinal cord, but there are some questions that they do not so clearly solve, and such are the following. Do all the sensitive fibres cross each other in the spinal cord? and if some do not, what is their proportion to those which do pass from one side of the cord to the other? I believe that the truth is that very nearly all the sensitive nerve-fibres, coming from the trunk and limbs, cross each other in the spinal cord, and that, in consequence, the transmission of the sensitive impressions, made upon one side of the body, takes place almost entirely along the opposite side of the spinal cord. If this conclusion is not sufficiently grounded on the facts, heretofore related, I hope that the pathological cases I am about to mention will contribute much to confirm its exactitude.

§ II. *Pathological facts proving that there is a crossing of action for sensibility in the spinal cord.*

After having discovered, by experiments on animals, that there is positively a crossing of action in the spinal cord, I have, at first, been very much surprised that physicians had not discovered the same fact on man. But, after having thought for some time about it, I have found: 1st. That the number of cases in men of an alteration of the spinal cord, limited to a small part of a lateral half, is not considerable; 2d. That many physicians being unaware that an alteration of one side of the spinal cord is able to produce a loss of movement on the same side and a loss of sensibility on the other side of the body, have not examined the state of sensibility of their patients in the side where it was altered. This will be proved by some of the cases which I will report hereafter.

I will divide into two series these pathological cases. In the first series I place cases of limited alterations of a lateral half of the cord, some proving the existence of the crossing of sensitive nerve-fibres in this organ, some others in accordance with the preceding but not so able to prove this fact. In the second series, I place cases of alteration of one side of the medulla oblongata or of the Pons Varolii, which cases seem to me to prove positively the existence of the crossing of sensitive nerve-fibres in the spinal cord.

First Series of Cases.

In the name of a committee of the Société de Biologie of Paris, I have published a report on a paper of Dr. Oré of Bordeaux, in which he has recorded two important cases, observed by himself, and of which the following is an abstract.

CASE I.—A patient was admitted into the *St. André* hospital in Bordeaux, under the charge of Professor Gintrac. The symptoms were: paralysis of voluntary movement on the right side of the body, with conservation of sensibility; on the contrary, conservation of voluntary movements on the left side, and a great diminution of sensibility. The morbid appearances consisted in the presence of a fungoid growth (*végetation fongoïde*), pressing upon the right lateral half of the spinal cord.

CASE II.—Another patient was admitted in the same hospital. *Symptoms:* Loss of voluntary movements, with conservation of sensibility in the two limbs on the left side. On the other side sensibility much diminished (*trés obtuse*). *Inspection*: A clot of blood was found in the lateral half of the spinal cord in the cervical region.

CASE III.—A man, after having felt a sudden pain in his back, became paralyzed of voluntary movements in the right inferior limb. Sensibility was not altered on this side, but on the left side, where movements were not impaired, sensibility was entirely lost from the breast to the foot. *Inspection:* Brain and its membranes normal; in the spinal cord a hæmorrhage had taken place, and blood was found in the right side of the central gray matter, in the neighborhood of the anterior column, in the costal region. This case is assuredly a very remarkable one, and as it has been recorded by a very accurate observer, Mr. Monod, a surgeon of eminence in Paris, we cannot have any doubt about the exactitude of the details.*

CASE IV.—Mrs. W., after a profuse hæmorrhage, became paralytic. Upon one side of the body there was a loss of sensibility, without, however, any corresponding diminution of power in the muscles of volition. The breast, too, upon that side partook of the insensibility,

* See for a full account of this case the Bulletin de la Société Anatomique. No. xviii., p. 349, obs. 3.

although the secretion of milk was as copious as in the other. She could see the child sucking and swallowing, but she had no consciousness from feeling that the child was so occupied.

Upon the opposite side of the body there was defective power of motion, without, however, any diminution of sensibility. The arm was incapable of supporting the child; the hand was powerless in its grasp; and the leg was moved with difficulty, and with the ordinary rotatory movement of a paralytic patient; but the power of sensation was so far from being impaired that she constantly complained of an uncomfortable sense of heat, a painful tingling and more than the usual degree of uneasiness from pressure, or other modes of slight mechanical violence.

She again proved pregnant. Her delivery was easy; but after about ten days she complained of numbness on both sides. Her articulation was indistinct; she became more and more insensible, and sank completely comatose.

No positive disorganization of the brain could be detected. The ventricles, however, contained more than usual serum; and there were found thickening and increased vascularity of the membranes, with firm adhesion in some parts; in others, an apparently gelatinous, transparent and colorless deposit interposed between them.

Unfortunately, no examination of the spinal cord was made.

This case has been recorded by Dr. H. Ley, who communicated it to Sir Charles Bell*. It cannot prove much, but, if besides what we know of the symptoms, as regards sensibility and movement, we take notice of what is said about the temperature of one side of the body, it acquires more importance. I will show, in another part of this paper, that an alteration of a lateral half of the spinal cord is followed by an increase of temperature, in the limb or limbs situated behind and on the side of the alteration. It seems that the same thing existed in Dr. Ley's patient, who was constantly complaining of an *uncomfortable sense of heat*, in the side paralyzed of movement.

Case V.—A man fell on his back, from a height of 20 feet; after having recovered his consciousness, he discovered that the whole left side of his body, from the shoulder to the foot, was paralyzed of movement,

* See: The nervous system of the human body, by Sir C. Bell. 3d Ed. Lond. 1844, p. 245.

but that there was not the slightest alteration of sensibility, and that the right side of the body, in which the movements were free, was completely deprived of sensibility.

Three important facts, precisely like those I have discovered in animals, after the transversal section of a lateral half of the spinal cord, existed in this case.

1st. A morbid exaltation of sensibility in the side where movement was lost.

2d. A diminution of temperature in the side where the paralysis of sensibility existed.

3d. An increase in temperature in the side where the paralysis of movement existed.

When Dr. Dundas, who has recorded this curious case, published it, the patient was living and improving; so that we do not know what was the alteration existing in the spinal cord, but the analogy between this case and other cases, where inspection took place, and with the results of my vivisections, appear to prove that there was an alteration of a lateral half of the spinal cord.

In the following case the direction of a sword, which had cut a part of the spinal cord, in a man, appears to prove that a lateral half had been divided, and the symptoms have been the same as in the animals, upon which I have experimented.

Case VI.—A drummer of the National Guard of Paris, received a wound in the back of his neck. A sword, thrown at him, had penetrated the superior part of the right lateral half of the neck. An incomplete paralysis of movement took place in the right side of the body, and, some time after, it was *accidentally discovered* that sensibility was lost in many parts of the left side of the body. After twenty days the wound was cured and the man went out of the hospital, still paralysed.

From what we know of this case, it appears that the sword had incompletely divided the right lateral half of the spinal cord. The paralysis of motion on the right side of the body was certainly produced by the division of a part of the anterior column, and as the instrument had penetrated the right side of the back of the neck, it must have divided the parts between the anterior column of the spinal marrow and the external surface of the right side of the neck. These parts, besides the muscles and bones, are the lateral and posterior columns and

the gray matter of the right half of the spinal cord. So that, in this case, nearly the same injury and also the same morbid phenomena had existed as in the animals on which I have divided a lateral half of the spinal cord.

In this case the surgeon, and it was Boyer,* had not examined the state of sensibility in the side where the patient had the power of movement, and as the patient himself was not aware that he had lost his sensibility (and such a fact is not of uncommon occurrence) he had not spoken of it. Only the 13th day after he had been admitted in the hospital, having been pinched by a nurse who was playing with him, he found that he had lost his sensibility and then the surgeon, (who, as every one knows, is one of the best practitioners who have existed in France, in this century,) was informed of the fact.

What has occurred to Boyer, in this case, shows that I was right in saying, that physicians, not being aware that there is a crossing of sensitive nerve-fibres in the spinal cord, have neglected to examine the state of sensibility, in certain cases, where, had they done so, they would have found it lost or diminished, and would have been, in consequence, led to discover the crossing of action for sensibility. In the following case, for instance, there is not a single word said, about the state of sensibility in one side of the body, where, according to what I have discovered, sensibility was very likely diminished. Dr. R. B. Todd, who relates this case†, is, undoubtedly, one of the most eminent and the most accurate Physicians of London, and I regret to have to point out this fault, in a case about which he has displayed, in other respects, his usual talent of observation.

Case VII.—M. C. admitted Nov. 18th. Headache. Complete paralysis of the left arm, with flaccidity, and some wasting of the muscles. In walking she dragged her left leg with a sweeping movement. Although the palsy of the arm was complete as regards motion, she retained some power of the leg and could move it slowly up and down, as she lay in bed. But she was unable to hold it up from the bed. Sensibility was impaired, although she retained a considerable amount of feeling on the paralyzed side. On the 11th of December she was found to have lost the use of the left leg completely. She complained

* See his Traité des Maladies Chirurg. Vol. vii. p. 9. 1st ed.

† See his Clinical lectures on Paralysis, disease of the Brain, and other affections of the nervous system. London 1854, p. 321. Case LXIII.

also of twitching on the left side of her body. The intercostal and abdominal muscles of the left side remained perfectly motionless during respiration. A remarkable sign indicated the want of equilibrium between the right and left abdominal muscles in expiration; the umbilicus, at each expiration, was distinctly drawn to the right side. Sensibility was not more impaired in the paralyzed limbs than on her admission. No difference could be observed between the two sides as regards temperature. On the 12th the right arm was found to be partially paralysed; she was just able to flex and extend the finger slowly and feebly.

The action of the diaphragm was so feeble that it could scarcely be felt in its descent. On the 13th, sensation more impaired in the left arm and leg, and she complained of a want of power over the right leg. On the 14th, the paralysis continues to increase; it is complete on the whole of the left side, below the neck and of the right arm. Voluntary power over the right leg rapidly failing; she can but just move the toes and contract the muscles of the calf, but not sufficiently to move the foot. Breathing gradually diminished and she died.

The disease consisted chiefly in an enlargement of the odontoid process of the second vertebra. This extended backwards, wearing through the dura mater, and it was covered at its upper part and on the left side by a fibro-cartilaginous growth, which compressed and flattened the spinal cord on the left of the median fissure. The compression of the cord was so great, that it seemed as if a large portion of the nervous matter had been pushed from the left to the right side and partly upwards; and the cord was swollen both above and to the right of the compressed part. The nervous matter on the left side was soft and slightly discoloured, as from small ecchymoses; that, on the right of the fissure, was soft and diffluent.

I have thought proper to record here all the principal features of this case because it *appears* to be opposed to my view about the crossing of sensitive fibres, in the spinal cord. But 1st, as I have previously said, the state of sensibility of the right side has not been noted in this case; 2dly, the alteration of the spinal cord, even many days before death, was not limited to the left side.

I regret not having been able to procure the *Ephemeridæ Naturæ Curios.*, which contain, according to Abercrombie, a case in which

there was loss of motion on the one side, and loss of feeling without any diminution of motion on the other. (Cent. II, Obs. 196.)

I read in Bostock's Physiology, (3d edi. p. 163, note 2,) that a patient, whose case is reported by Dr. Bright, (Med. Reports, vol. II, p. 548-9,) had a paralysis of the motive nerves of the left extremity and of the sensitive nerves of the right. In this case there was, if I remember well, an alteration of the left side of the spinal cord. I had taken some notes about this case, but I have lost them, and I have not actually at my disposal, Dr. Bright's book.

Second Series of Cases.

The great fact that, when a disease exists in one side of the brain, it is the opposite side of the body, which is paralyzed, both of movement and sensibility, has compelled Physiologists to put forward some views as regards the place where exists the crossing of fibres. After the discovery of Sir Charles Bell, it has been impossible to explain by the decussation of fibres, existing between the two anterior pyramids of the Medulla Oblongata, the crossing of action for sensibility. Two opinions have been proposed, one by Sir Charles Bell, the other by Longet. According to the first of these writers, the sensitive nerve-fibres make their crossing, on the posterior surface of the Medulla oblongata, in a great part of the extent of the 4th ventricle.* According to Longet the posterior columns of the spinal cord, which he considers as containing all the sensitive nerve-fibres, coming from the body, pass through the cerebellum, from which they go out, as a part of the *processus cerebelli ad testes*, and they decussate in front of the Pons.†

In his very remarkable work on the nervous system, Foville‡ has described, very minutely, decussations of fibres, taking place all along the median line in the medulla oblongata, the Pons Varolii, between the crura cerebri, and between the corpora quadrigemina.

Certainly if the crossing of the sensitive nerve-fibres do not take place in the spinal cord, as I have tried to prove that it does, it must take place somewhere in the medulla oblongata, the Pons Varolii, etc. And if it takes place in the medulla oblongata and the Pons, what

* Philosop. Trans. of the Royal Soc. of London, 1835. And also the Nerv. syst. of the human body, p. 231-40. London 1844, 3d ed.

† Traité d'Anat. and de Physiol. du syst. nerv. 1842, vol. I, p. 385.

‡ Traité complet de l'anat. du syst. nerv. cérébro-spinal. Paris 1844, p. 298-326.

must we find in cases where an alteration exists only in one side of these nervous centres? There must evidently be a diminution of sensibility on both sides of the body, because many fibres, belonging to the two sides, must necessarily be altered or divided. Let us suppose, for instance, a tumor, as large as a walnut, having altered or destroyed one of the sides of the Pons Varolii (there are many such cases on record); and let us admit that it is the left side. Now, in this side, there are the sensitive fibres of the left side of the body, which have not yet made their decussation and which make it in the Pons or a little forwards, between the corpora quadrigemina or the crura cerebri. These fibres are altered or divided, and, in consequence, the left side of the body must lose a part of its sensibility. But, the fibres coming from the right side of the body, and which have made their crossing in the medulla oblongata, and also the fibres of the right side, which pass in the Pons, from the right to the left, must be altered or divided, and, in consequence, the right side of the body must lose a part of its sensibility: so that the two sides of the body, in this hypothesis, must have a diminution of sensibility. A like reasoning might be applied to what must take place when the disease exists in one side of the medulla oblongata, admitting that the decussation of sensitive fibres takes place mostly there, and, the same things might be said, also, for the parts anterior to the Pons Varolii, if it were admitted that there takes place the greatest part of the decussation of the sensitive nerve-fibres.

Let us see now what are the facts. In almost all the cases where a disease has existed, on one side of the medulla oblongata, the Pons, etc. there has been a loss or a diminution of sensibility in the opposite side of the body, and no diminution in the same side. In cases where there has been an alteration on both sides, (in one of the above named nervous centres) but greater in one than in the other, sensibility was lost in the side of the body opposite to the side of the nervous centre which was most altered, and only diminished on the side of the body opposite to the side less altered in the nervous centre.

All these facts clearly prove: 1st. That the sensitive nerve-fibres of the trunk and limbs do not decussate in the medulla oblongata, the Pons Varolii, etc.

2d. That they have made their crossing before reaching these nervous centres, and that, consequently, they make it in the spinal cord itself.

These conclusions result so positively from the facts I have spoken

of, and they are so decisive that I cannot understand that Physiologists and Physicians have not already deduced them from these facts.

I do not intend to relate here all the cases that are on record, and which prove that an alteration of one side of the medulla oblongata, or of the Pons Varolii, produces hemiplegia both of sensibility and movement. I will merely relate some which will serve as specimens. I ought to say that for the diseases of these nervous centres as for the diseases of the spinal cord, the recorders of the cases have very frequently neglected to speak of the state of sensibility, and have merely said that there was hemiplegia. So that these cases, which might have been of great scientific and practical importance, are deprived of their principal subject of interest.

All the most eminent physicians who have particularly studied the diseases of the nervous system agree in saying that the alterations of the medulla oblongata and of the Pons Varolii produce a loss of sensibility in the opposite side of the body and not on the corresponding side.

This being the general opinion I will relate merely a few cases.

Case I.—Headache on right side. Numbness and difficulty to move the left arm. Slight paralysis of the left leg. After some time, hemiplegia perfect in left side, where sensibility and temperature are diminished.

Inflammation and suppuration of the right side of Pons Varolii.*

Case II.—A man was admitted at the hospital of Bicetre. Mouth drawn towards the right side, tongue deviated to the left, pupil of the left eye dilated and almost deprived of mobility; no palsy in the limbs. Two days after, headache, right side; limbs paralyzed on the left side; sensibility very dull in these limbs. The next days the symptoms go increasing, but the limbs on the right side remain perfectly healthy. The hemiplegia becomes complete in the left side. Coma,—death.

Inspection: Brain and cerebellum healthy. In the right lateral half of the Pons Varolii, a white softening (*ramollissement*) is found; the left half is healthy. The centre of the softened part is extremely soft (*diffluent*) and water takes it away.

This very important case has been recorded by Mr. Charcellay and published by Ollivier d'Angers.†

* Hist. Anat. des Inflammations, par A. N. Gendrin, 1826. Vol. ii. p. 155.

† Traité des maladies de la Moelle épinière, 1837—3d ed. vol. ii., p. 315.

Case III.—G. J. was brought to a hospital deprived of consciousness, with hemiplegia of the left side, and loss of sensibility of the same parts. Pupils dilated, the left without mobility; face drawn on the right. After bleeding he recovers his consciousness and is better for about a week. Then he loses the power of speech. Headache and the same paralysis of movement and sensibility on all the left side of the body, which is slightly flexed, but without rigidity. Coma,—death.

Inspection: Nothing in the brain. In the inferior and the middle part of the Pons Varolii exists a *ramollissement*, very distinct, irregular in its shape, large like an almond, rose-coloured. The softened tissue resembled to liquid pus.

This case is reported by Dr. L. Greuzard.*

It is known that, very frequently, organic diseases slowly developed, in the different parts of the encephalon, produce but a very slight degree of paralysis of movement and of sensibility. In such cases this slight paralysis exists on the side of the body opposite to the side of the alteration. I relate the following case as a specimen.

Case IV.—A gentleman had been for several months in bad health: Dyspepsia, liver complaint, tightness across the chest. Respiration very imperfect along the right side of the thorax, and some œdema of the legs. One morning he was suddenly seized with giddiness, noise and confusion in his head, and numbness of the whole right side. He was oppressed but not comatose. He complained of a tight and cramped feeling of his right arm and leg, with much prickling and loss of command of the parts, but when desired to grasp another person's hand with his, the muscular power did not seem to be diminished. Face slightly distorted.

He became better. His sight was good, but he had a slight degree of paralysis of the upper eye-lid of the right side. His breathing was easy, and he made no complaint except of the tight and cramped feeling, with numbness of the right arm and leg. Fever came and he died. He continued sensible to the last, and during this febrile attack he seemed to have acquired an increased command over the limbs of the affected side.

Inspection: Brain and cerebellum healthy. In separating the cere-

* Archives gén. de méd. 2d series. Vol. V., p. 458.

bellum from the Pons Varolii a cavity was exposed about the size of a hazel nut, lined by a soft cyst, and full of dark, grumous blood of a firm consistence. This remarkable cavity was formed partly in the substance of the Pons and partly betwixt it and the base of the cerebellum. It was decidedly more to the left side than the right, and the surrounding substance was softened.*

These cases agree with the results of my experiments, and I believe that if we take a survey of all the facts (experimental and pathological), that I have related, it is impossible not to conclude that almost all the sensitive nerve-fibres, coming from the trunk and limbs, cross each other in the spinal cord. Some of the fibres, belonging to the cervical part of the spinal cord, perhaps, decussate a little higher, *i. e.*, in the medulla oblongata; but a few only may be in this case, as it appears from one of the experiments above related (see exp. 9th).

I have, many times, examined if the roots of a pair of nerves make their decussation near or far from the point of their communication with the spinal cord. After a transversal section of a lateral half of this organ has been made (never mind at what level), if we irritate the posterior roots of the pair of nerves situated directly behind the section, we find that pain is felt by the animal, and if we irritate the roots of the same pair of nerves on the opposite side, the animal appears to feel much less. So that the decussation of the sensitive nerve-fibres takes place, at least partly, directly after the entrance of these fibres into the spinal cord.

The same result is obtained when, besides the section of a lateral half of the spinal cord, the posterior column of the other half is divided at the same place, and this proves decidedly that it is *not* through this part of the spinal marrow (I mean the posterior columns), that the transmission of sensitive impressions takes place. According to my researches it is through the central part of the cord that this transmission is made.

The pathological facts I have related, concerning the Pons Varolii, agree perfectly well with the following experiment.

A longitudinal section is made on a young animal, on the median line of the medulla oblongata and the Pons Varolii, so as to divide them entirely into lateral halves. It is certain that if the sensitive

* Pathol. and Practical Researches on Diseases of the Brain and Spinal Cord. By J. Abercrombie. Case CXIX.

nerve-fibres of the body made their entire decussation or a great part of it, in these nervous centres, we should find sensibility very much diminished, if not lost, everywhere in the trunk and limbs. But this is not the case: the animal remains, for some time, very sensitive.

Before concluding this part of this paper, I must say a few words about the results obtained by some physiologists, who have made some experiments like one of mine.

Sir A. Cooper, at the request of Dr. J. Yelloly, has made one experiment, on a dog, to ascertain what are the effects of the section of a lateral half of the spinal cord. Yelloly had been led to have this experiment performed, after having witnessed the case of a man, who had numbness and paralysis of the right side of the body, and in whom a tumor, the size of a hazelnut, was found lying on the left side of the Pons Varolii, sunk into it, and extended into the left pyramid of the medulla oblongata.* The experiment made by Sir Astley, which might have shown to him the curious and important fact that a section of one half of the spinal cord, produces a paralysis of movement on one side and a paralysis of sensibility on the other, did not lead him to such a discovery. He noticed only the state of voluntary movement, very likely, because he took for granted that what existed for movement ought to exist also for sensibility. And thus it is that, even sometimes, men of the greatest talent, taking things for granted, retard, instead of assisting, the progress of science.

Schoeps, Van Deen and Stilling, in examining, on animals, the state of the sensibility of the parts of the body situated behind a section of a half of the spinal cord, have found that it was not lost; but as they did not examine comparatively the state of sensibility of the other side, they did not discover the important fact that the sensitive nerve-fibres decussate in the spinal cord.

I had, myself, ascertained long ago the truth of the fact, found by Schoeps, first, and afterwards by Van Deen and Stilling; but I had, like these physiologists, given of it an explanation† quite different from that which I now admit. Kürschner and Longet have denied the fact that sensibility persists in the parts of the body situated behind and on the side of a lateral hemisection of the spinal cord. I have shown elsewhere what has led them to this erroneous statement.

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* Trans. of the Med. Chir. Soc. of London. Vol. I., p. 181.

† In my Inaugural Dissertation, 2d part, p. 20-28. Paris. January 3d, 1846.

Such was the state of science, as regards the results of a section of a lateral half of the spinal cord, when, in the year 1848, I made the discovery of the crossing of action for sensibility in the spinal cord. Since then, some of my experiments have been repeated, and found exact by Professor Oré of Bordeaux, and Dr. Ludwig Türck of Vienna.

§ III. *Influence of a section or an alteration of a lateral half of the spinal cord, and of the medulla oblongata, upon voluntary movements.*

I do not intend to examine at length this subject. I will only, after having briefly exposed the results of some of my experiments, show that there are many points of great physiological and pathological interest connected with the following question: in what part of the nervous centre do the voluntary motor nerve-fibres perform their decussation?

I have seen, so many times, that, in mammals, in birds and in other animals, the transversal section of a lateral half of the spinal cord is not followed by a complete loss of voluntary movements, in the parts situated on the same side and behind the section, that I have not the least doubt that there is, at least, in animals, a small number of motor nerve-fibres decussating in the spinal cord. But, in man, the facts *appear* to prove that none of the voluntary motor nerve-fibres decussate in the spinal cord. If it is so, there is every appearance that this decussation takes place *entirely* in the medulla oblongata.

This view is opposed to what is now generally admitted. Since the publication of the researches of Foville,* of Valentin,† and others, a general assent has been given to their idea that the nerve-fibres, coming from the antero-lateral columns of the spinal cord, after having ascended to the medulla oblongata, to the Pons Varolii, and higher, decussate there, on the median line.‡ And it has been concluded from this view, that the principal decussation of the motor nerve-fibres takes place in the Pons Varolii and between the crura cerebri, etc., and that the decussation of the pyramids is of less importance.

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* Loco cit.

† Traité de Névrologie, traduit par Jourdan, p. 236, 237, 246.

‡ Some anatomists have already dissented, and particularly L. Hirschfeld and Sappey, who admit that the transversal fibres of the Pons have been mistaken for decussating fibres. See the excellent *Traité d'anat. descript.* par P. C. Sappey. Vol. II., 1st part, p. 141.

But, I think, it is easy to prove that this view is not exact. Were it right, we should, undoubtedly, observe, in cases of alterations of one side of the Pons Varolii and neighboring parts, symptoms quite different from those which truly exist.

Let us examine what are the symptoms and what they should be if the theory, I consider erroneous, were right.

1st. Suppose an alteration on one of the crûra cerebri; according to the theory, as a part of the decussation of the motor nerve-fibres takes place there, we should find that voluntary movements are diminished on both sides of the body, more, I acknowledge, on the side opposite to the alteration, but partly also on the same side of the body. This is not what exists. One side only of the body is paralyzed, and it is the opposite side. A number of cases prove that this is the rule. The hemiplegia may be complete or incomplete, according to many circumstances, and particularly the extent and the nature of the alteration, and the rapidity of its formation; but there is something constant, together with these numerous varieties, it is that the seat of the paralysis is on the side of the body opposite to that of the disease. It is evident, in consequence, that the decussation of the motor nerve-fibres has entirely taken place before they reach the crura cerebri.

2dly. The same thing may safely be said of the corpora quadrigemina. Although the cases relative to these organs are much less numerous than the cases relative to the crura cerebri, there are enough of them on record, to prove that the crossing of the motor nerve-fibres, must have taken place entirely before they reach the basis of the corpora quadrigemina. Besides some other cases, there are two very interesting which have been published: one by Mohr,* and the other by Burnet.†

3dly. As to the Pons Varolii, the question is much more interesting, because this is the place where the decussation of motor fibres, according to Foville, Valentin and Longet, more particularly takes place.

Here, according to the theory of these distinguished anatomists, we ought to find different symptoms in these three different cases: 1st. Alteration limited to the superior part of the organ; 2d. Alteration limited to the inferior part (the nearest to the medulla oblongata); 3d. Alteration occupying the whole of a lateral half of the organ. In the

* In Casper's Wochenschrift, 1840, p. 497.

† Journal Hebd. de Méd., 1829, p. 439.

first case we should see an incomplete paralysis on both sides, but greater on the side of the body opposite to the side of the disease, and, in the second case, we should see also an incomplete paralysis on both sides, but greater on the side of the body corresponding to the altered side of the Pons, than on the opposite side of the body. Cases are on record proving that it is not so, and that whatever is the part of the Pons altered, (the superior, the inferior or the middle) the same effect is produced on voluntary movements. When paralysis is produced by the disease, it exists, exclusively, on the opposite side of the body, and when the alteration is not limited on one side of the Pons and extends on the other, then the side most paralyzed in the body is the one opposite to the most altered side of the Pons.

If the theory of Valentin, Longet and others were true, we should find in cases where the whole of one half of the Pons is diseased, the two sides of the body partly paralyzed,—the side opposite to the alteration less than the other. On the contrary, we find that paralysis exists only on one side, and that it is the one which, according to the theory, should be *less paralyzed.* I might prove that I am right by relating here many pathological facts, but as I have already mentioned some, I think it sufficient only to record the following.

Case I. G. was admitted in a hospital. The right side of the body bent; intelligence entire; all the left side of the face paralyzed both of movement and sensibility. Nothing anormal in the left side of the body; but on the right side the shoulder is falling, the superior limb is paralyzed. The inferior limb has still a part of its voluntary movements and of its sensibility.

The patient, after having been placed on his feet, could not stand, the right side giving way, and he should have fallen had not the trunk been supported. Respiration weak, difficult. Until death, the same symptoms have been observed, without modification.

Inspection: Spinal cord and brain denser than normally; this last organ is injected. Lateral ventricles contain five or six ounces of serosity. The whole left side of Pons Varolii is diseased; it is considerably larger than usual, forming a tumour which extends itself over the spinal cord and the crura cerebri and cerebelli, with the substance of which it is united. The tumour is composed of a fibrous tissue, possessing some of the characters of cancer. The posterior part of the tumour extends until the anterior parietes of the 4th ventricle. A

few small clots of blood existed inside of the enlarged and diseased left side of the Pons; another one, large like a bean, existed between the occipital bone and the right side of the Pons.

This important case has been published by Mr. Carré.*

The following case, related by Romberg,† is very much like the preceding, but more interesting, on account of a more precise account of the state of sensibility. I regret to be obliged to give only a short summary of it.

CASE II.—A young Pole, after a nervous fever, became paralyzed of sensibility and movement in the left side. Anæsthesia in the right side of the face. Coma,—death.

Inspection: The right side of the Pons is the double of its normal size; it extends in front and behind, and there it passes under the right olive, compressing the neighboring parts of the encephalon and the roots of the nerves. The cause of the enlargement of the right side of the Pons was a very large clot of blood.

According to Romberg, a case very much like this one is recorded by Dr. R. Bright (Reports of Med. Cases. Vol. II., part 1, p. 49).

I will give now a case showing that, when an alteration exists in both sides of the Pons Varolii, but more in one than in the other, the paralysis is greater in the side of the body opposite to the most altered side of the Pons.

CASE III.—Headache; both pupils dilated, still contractile, strabismus and diplopia. Diminution of movement and sensibility in the limbs, and particularly in the left ones. After a few days paralysis of the limbs increased.

Inspection: Nothing in the brain. Pons Varolii and right crus cerebelli, compressed and softened by a tumor, situated in the middle of the Pons, but more on the right side.‡

When the disease exists in the medulla oblongata, the symptoms vary according to its situation. Is it above the decussation of the pyramids, and limited to one side, it produces paralysis on the opposite

* Arch. génér. de Méd. 1st series. Vol. V., p. 234.

† Lehrbuch der Nerven krankeiten des Menschen. 1851. Vol. I., 2d part, p. 198, 202..

‡ See: Quoedam de Ponte Varolii. By H. Romberg. 1838, p. 17.

side of the body. Such a case has been published by Ollivier, d'Angers.*

When an alteration exists on one side, at the place where the pyramids decussate, we find that there is a partial paralysis on both sides of the body. This comes from the fact that there are some motor nerve-fibres belonging to the two sides of the body which are altered. Some curious cases of this kind are on record: one is related by Mr. Th. Chevalier.† There was a paralysis of the two arms, produced by a cancerous tumour on the summit of the left pyramid.

If the theory admitting the crossing of motor fibres in the Pons Varolii and in front of it were true, we should see, in cases of alterations limited to one side of the Pons, symptoms like those observed in the case recorded by Mr. Chevalier.

Now, to sum up what I have said about the parts constituting the *Isthmus of the Encephalon*, we see: 1st. That alterations, limited to one half of these parts, *i. e.*, the corpora quadrigemina, the crura cerebri, the Pons Varolii and the medulla oblongata (if the disease is above the decussation of the pyramids), produce paralysis on the opposite side of the body; 2d. That when the disease is at the place of the decussation of the pyramids, and on one side only, there is a paralysis on both sides of the body. It results clearly from these facts that the motor nerve-fibres coming from the trunks and limbs do not make any notable part of their crossing above the decussation of the pyramids.

Now the question is, whether all the motor nerve-fibres make their crossing where the decussation of the pyramids takes place. I have already said that it *appears* from the facts observed in man, that the motor nerve-fibres do not make their crossing in the spinal cord. If it is so (and I ought to say that I have some doubts about it) we arrive at a very strange result, of which I will say a few words.

Every one knows that on each side of the spinal cord there are three white columns: one anterior, one lateral, one posterior. The two first have been considered by some physiologists as being the only motor tracts of the cord, and it is true that their section produces a mere paralysis of movement, and that there are many pathological cases, in which these columns having been altered, there has been a paralysis of movement. But, experiments and pathological cases seem to prove that

* Traité des Mal. de la Moelle, 1st ed., obs. xxxvi.

† Lond. Med. Gaz. June 1834.

a paralysis of movement is more easily produced by a section or an alteration of the anterior columns than by a section or an alteration of the lateral columns. Now, many cases are also on record, proving that an alteration of the posterior columns may produce a paralysis of movement, so that, were we to conclude from these facts, we should admit that all the white columns of the cord are motor tracts. But I ought to say, that experiments on animals and some cases, in man, in which there has been only a transversal section or an alteration of the cord, not extended in length and merely destroying transversely the posterior columns, did not produce a paralysis of movement; so that we cannot admit that these columns contain voluntary motor fibres longitudinally disposed.*

The anterior and lateral columns appear then to be the only voluntary motor tracts in the spinal cord; but if they are so, and if there is no decussation in this organ, a very great difficulty presents itself: the crossing of the pyramids takes place only for the fibres of the lateral columns (not even for all of them), and the fibres of the anterior columns do not decussate in the medulla oblongata, so that there are certainly not more than one third of the voluntary motor nerve-fibres of the trunk and limbs, (and perhaps only one fourth) which decussate in the medulla oblongata, to form the anterior pyramids.† As all the

* In a paper on this subject I will try to prove that when the posterior columns are altered, in a great part of their length, there is a paralysis of the reflex movements and no decided loss of the purely voluntary movements. This reflex-paralysis may exist as well without as with a loss or a diminution of sensibility. There are many pathological cases on record, (I have collected more than twenty,) in which the posterior columns were more or less altered, in a great part of their length, and, in these cases, sensibility was entire, or only slightly diminished, and a reflex-paralysis existed. These facts certainly prove that the posterior columns are not the way of transmission of the sensitive impressions; but, although they have not this function, they appear to be very sensitive, and it results from a very curious physiological fact, which I have discovered, that they contain sensitive nerve-fibres, which appear to be directed quite in opposition to what might be imagined. They seem to go obliquely from the posterior columns downwards, instead of going towards the brain. See my paper on this subject in the Boston Med. and Surg. Journal, No. 16, 1852, and in the Gaz. Med. de Paris, 1853, p. 430.

† Anatomists now generally agree about these facts: 1st. That the decussation of fibres in the inferior and anterior part of the medulla oblongata takes place only between fibres of the lateral columns; 2d. That some of the fibres of these columns, as well as all the fibres of the anterior columns, do not decussate there; 3d. That the pyramids contain some fibres, received from the anterior columns, and which do not participate in their decussation.

voluntary motor nerve-fibres, according to what we know of the pathology of the brain, must decussate somewhere, we are led to admit one of the four following opinions, each of which appears to be supported by some facts:

1st. The decussation of *all* the voluntary motor nerve-fibres takes place in the medulla oblongata, where the fibres of the lateral columns cross each other to form the anterior pyramids.

2d. The decussation of the voluntary motor fibres takes place partly in the medulla oblongata, but for a greater part in the Pons Varolii, and in front of it.

3d. The decussation of the voluntary motor fibres takes place in the medulla oblongata and in the spinal cord.

4th. The decussation of the voluntary motor fibres takes place together in the spinal cord, the medulla oblongata, the Pons Varolii and the parts in front of it.

I cannot discuss at length here the value of each of these opinions, but I must say a few words about them. I will say first, that, after having examined the value of the pathological cases I have related, and of others, for which I have no room, it does not seem possible to doubt that there are very few (if any) voluntary motor fibres, which reach the Pons Varolii, without having made their decussation.

Therefore we must admit that the fibres of the anterior columns, and those fibres of the lateral columns, which do not decussate in the medulla oblongata to form the anterior pyramids, are not voluntary motor fibres, or that they have made their decussation in the spinal cord.

As I have said already that, in man, there appears to be no decussation of voluntary motor nerve-fibres, in the spinal cord, we are led to admit that the fibres of the anterior parts of the medulla oblongata (except those of the pyramids) are not voluntary motor fibres.

Now, there are facts, of which I have already spoken, which might prevent our admitting that the fibres of the anterior columns are not voluntary motor fibres; but we must say, about those facts, that if they are able to prove something for the fibres which are in the anterior columns, in the spinal cord, they prove nothing at all for the fibres which exist in the anterior columns, in the medulla oblongata. To have a decisive value, these facts should be accompanied with a demonstration of the continuity of the fibres of the anterior columns in the two

parts: spinal cord and medulla oblongata. But there is no such demonstration given, and, still more, here are facts which appear to prove that such a continuation does not exist, at least, for a certain number of fibres.

Exp. I.—If we make, at the level of the 10th costal vertebra, in a mammal, (dog, cat, rabbit, or Guinea pig) a transversal section of the two anterior columns of the spinal cord, there is a paralysis of movement more considerable, than if we have divided the two lateral columns. It seems, then, positive that, at this place, the anterior columns contain more voluntary motor fibres than the lateral columns.

Exp. II.—If we make, in the cervical region, the same comparative experiments, we find that the section of the lateral columns produces a more considerable paralysis, at least, on the posterior limbs, than the section of the anterior columns. The number of voluntary motor fibres appears, then, to have diminished in the anterior columns and to have increased in the lateral.

Exp. III.—If we make, above the decussation of the pyramids, a transversal section, on both sides, of the part of the medulla oblongata, which appears to be the continuation of the anterior columns of the spinal cord, we find that there is only a very slight paralysis produced. I would have liked to compare the result of this operation to the result of the section of the pyramids, which are the continuation of the lateral columns; but I have not succeeded to divide them alone. Nevertheless we may make the comparison otherwise: if, after having made the section of the apparent continuation of the anterior columns, we divide the pyramids (and this may be done easily), we observe that the animal who, at first, was hardly paralyzed, becomes completely paralyzed.

This experiment appears to prove that the voluntary motor nerve-fibres exist, almost only, in the pyramids, and that there are but few of them in the apparent continuation of the anterior columns, in the medulla oblongata.

It results, also, from this experiment and from the two others, that the voluntary motor fibres are at first almost all in the lateral columns, in the medulla oblongata (in the pyramids), and that they leave gradually these columns to pass into the anterior, so that, at last, the lateral columns contain less motor fibres than the anterior.

Besides, according to researches made by Van Deen, Stilling, and myself, there appears to be in the anterior columns of the spinal cord, many nerve-fibres which are neither sensitive nor motor (at least motor of muscles of animal life). These fibres are inexcitable, like those of the brain and cerebellum, and I think that they may be considered as longitudinal commissural fibres.*

Now, to conclude, I will say that, from the four opinions, which I have related, as having facts in their support, the first appears to be somewhat too exclusive. It may be that some few fibres go up to the Pons Varolii, or still higher, to make their decussation, but there are strong reasons, nevertheless, which prevent my admitting that it is positively so. It may be also that some fibres make their decussation in the spinal cord itself, although it appears not to be so, according to pathological cases observed in man.† But if the crossing of the pyramids do not contain *all* the voluntary motor nerve-fibres of the trunk and limbs, the number of these fibres, which do not decussate there, is certainly small.

CONCLUSIONS.

From the facts, experimental and clinical, contained in the three paragraphs of the first part of this paper, I think I am entitled to draw the following conclusions:

1st. The sensitive nerve-fibres of the trunk and limbs appear to make the greatest part of their decussation, if not the whole of it, in the spinal cord, and not in the Isthmus of the Encephalon, as it was admitted.

2d. The voluntary motor nerve-fibres of the trunk and limbs appear to make their whole decussation, or, at least, the greatest part of it, in the inferior portion of the medulla oblongata, and not in the other parts of the Isthmus of the Encephalon, as it was admitted.

3d. According to the seat of an alteration in the cerebro-spinal axis,

* The recent researches of micrographers, so discordant in many respects, as regards the structure of the spinal cord, agree, nevertheless, in one point: it is that there are, in the anterior part of the spinal cord, transversal commissural fibres. The anterior columns, therefore, appear to contain transversal and longitudinal commissural fibres.

† See a Note of mine, on this subject, in the Comptes Rendus de la Soc. de Biologie. Vol. II., p. 195.

producing a paralysis, there are three different kinds of paralytic effects, which may exist:

a. The alteration being in any part of the Encephalon, except the inferior portion of the medulla oblongata,—the paralysis of voluntary movement and of sensibility exists in the side of the body opposite to the side of the disease.

b. The alteration occupying an entire lateral half of the inferior portion of the medulla oblongata, at the level of the decussation of the pyramids,—the paralysis of voluntary movement exists on both sides of the body, but incomplete, and the paralysis of sensibility exists only on one side, and it is the opposite to the side of the disease.

c. The alteration occupying an entire lateral half of the spinal cord,—the parts of the body situated behind it, on the same side, are paralyzed of voluntary movement, and the corresponding parts, on the other side, are paralyzed of sensibility.

(*To be Continued.*)

ART. II.—*A Case of Epilepsy Cured by Amputation.* By WILLIAM H. EDWARDS, M. D., Surry County, Virginia.

Judith, a negro girl, the property of Mr. Bolling Jones of Surry, aged 12, after eating a plentiful meal of bacon, cabbage and pickle, was taken with an attack of flatulent colic, which produced convulsions. Of this she was relieved, but violent attacks of epileptic fits supervened, returning at irregular intervals; sometimes five or six per week, then again none perhaps for two or three weeks. She always had a return at the commencement of her menstrual sickness; of this she was very regular, except during pregnancy. The third year after being afflicted with epilepsy she gave birth to a child. During the time of her pregnancy she had fits as usual; none occurring during labour, but returning as soon as the act of parturition was over, and it was supposed that she had at least fifty violent spasms in a day. At all times before the commencement of her attacks, she would complain of great weakness in her stomach and bowels, after the attack of her head and bowels. She never had but this child, though a married woman.

This state of things lasted for seven years, when during a sudden return of the convulsions, being left alone, she fell on the hearth, and during her spasmodic jerkings, one of her feet got in the fire and was very badly burnt, involving also the inner side of her left ankle, just above the joint. The burn was very deep, so as in a short time to expose the bone, the periosteum of which was destroyed, and with the very best medical attention she could not be cured. This additional affliction was borne for five years, during which time the epileptic fits were very violent—even so powerful at times as to leave her a raving maniac. The burns continuing very painful and withal extremely fetid, in her extremity she petitioned her master to have the leg amputated. Yielding to her solicitations, with the assistance of my brother, Dr. A. S. Edwards, the leg was taken off a few inches below the knee joint by the common circular operation. This was done in March 1852, Judith being there in the 24th year of her age, and 12 years since being first afflicted with epilepsy—she had a violent spasm the day before the operation was performed, but since which time, now being three years, *she has never had a return of the fits.*

With the assistance of a rough carpenter, a wooden leg was attached, and Judith now continues to perform her regular out-door work on the farm, moving about with great activity and enjoying unusual fine health. Her recovery was an event not anticipated, and so remarkable that I concluded to give it publicity. This I do without comment, only remarking that the operation was performed without chloroform, (this being objected to,) that it was attended with much hemorrhage and great prostration so as to endanger life for some 24 hours; that the stump did not heal very kindly, but in a few weeks she recovered, and in conclusion, that Judith was originally very healthy, and none of her parents ever had epilepsy.

ART. III.—*Injections in Gonorrhœa.* By THOMAS POLLARD, M. D., Richmond, Va.

The value of injections in gonorrhœa has not heretofore been well determined. There has also been much diversity of opinion as to the particular article to be used and the strength of the injection. Hun-

ter, though he entertained the opinion "that no matter of whatever kind can produce any effect on the part that forms it," and had an idea that though injections might stop the discharge, the inflammation would frequently continue in consequence of arrest of the secretion, which he regarded as one step towards a cure, says, "it appears from practice that an injection will often have an almost immediate effect upon the symptoms, and that therefore they must have some powers; and yet the kind of injection which would have the greatest specific powers, I believe is not yet known." In another place, after speaking of the dangers of improper use of this mode of treatment, he says, "but in cases that are mild, and in constitutions that are not irritable, injections often succeed, and remove the disease almost immediately—2 grs. of corrosive sublimate, dissolved in 8 oz. of distilled water, is nearly as good an injection as any of the kind." He is here speaking of *irritating* injections, which cure by setting up a new action, corresponding to Ricord's *abortive* method. Of astringent injections, he expresses the opinion that one is not much better than another.

Ricord's opinions on this subject seem, of late years, to have undergone some change unfavourable to the value of injections, or at least of the value of nitrate silver. In his former works, he speaks very highly and confidently of his *abortive* method when properly used. This method was the use of 15 grs. of nitrate silver to the ounce of water. More latterly, he says, "nitrate of silver is a powerful modifier of mucous surfaces, but not without some inconveniences; it often excites much pain, and the artificial inflammation which it causes is sometimes so severe as to occasion symptoms which, though transient, are none the less disagreeable. I have almost entirely renounced its use." He now prefers the following:

℞. *Aquæ Rosæ,* ℥*vj; Zinci Sulphatis; Plumbi Acetatis ää, grs. xxx. M.* Or this: ℞. *Aqua Rosæ,* ℥*vj.; Zinci Sulphatis, grs. xv.; Plumbi Acetatis, grs. xxx.; Tinct. Catechu; Vin. Opii., ää,* ℥*j. M.* To be shaken and used three times a day, the injection to remain in half a minute, or minute, if there is not too much sensibility of the urethra.

The objections which have generally been urged against injections, Ricord regards as unfounded. As regards the most prominent, and formidable objection against their use, that of producing strictures, he says injections *do not cause stricture in any case,* but on the con-

trary they anticipate them when they promptly stop a gonorrhœa. Badly administered, or highly concentrated injections, or those made of unsuitable material, may produce inflammation of the neck of the bladder, and engorgements of the epididymis, but that bad effects of any kind are only to be attributed to improper and badly administered injections.

Almost all writers on this subject, and among the most authoritative may be mentioned Hunter, Ricord, and Babington, agree on certain points in the use of injections in gonorrhœa—that if used in the first stages it should only be in the very first stages, before the symptoms of inflammation have run high, and in the declining stage to complete the cure, and prevent *gleet*. This we believe to be the true secret of the proper use of injections and one which is much too often overlooked in practice. The odium into which they have fallen with some practitioners is due to their indiscriminate administration at all periods of the disease, partly too in some cases to improper strength of the material used. The period after the commencement of the disease to which the *abortive* treatment is applicable in gonorrhœa cannot be accurately laid down. After the expiration of 24 hours it is often too late—and again, when no active symptoms of inflammation are present after the third, fourth, or even fifth day, it may succeed. But as a general rule, the sooner after the running commences, it can be instituted, the better, and the greater the prospect of success.

Two recent cases have occurred to me of rapid cure, produced by Ricord's *abortive* method, that is 15 grs. of nit. argent. to 1 ounce of water.

Case I was seen in about 24 hours after the disease first made its appearance. The injection referred to was used every other day for three times, and to all appearance the cure was complete. Not the least running was observed for *one week*. The gentleman was then subjected to improper sexual excitement, and the running returned, and was only stopped after considerable time and trouble.

In case II, the running commenced in the morning, the patient was seen in the evening. The injection was immediately used, and repeated every day for four days. On the 5th day the runnings ceased and has not appeared since, now the 11th day.

The injection should be repeated every day, or every other day, according to the effect produced. If much pain and irritation is the consequence, it should be used only every other day, or at longer interval if

these symptoms of irritation produced by the previous injection have not passed away. It is proper to observe that a mixture of balsam was conjoined with the treatment in each of these cases, as we believe it should always be—balsam to be used as long as the stomach will bear it, and then cubebs substituted for it.

After the violence of the disease has passed, as manifested by diminution of the discharge, disappearance of the swelling about the orifice of the urethra and of the ardor urinæ, we should resort to the astringent injections. Of these we have generally used sulphate or acetate of zinc, 2 or 3 grs. to the ounce of water. Ricord prefers a mixture of sulphate of zinc and acetate of lead, which forms acetate of zinc and sulphate of lead, to the latter of which he attributes some efficacy.

These injections should be used three or four times a day. Ricord says as many as six times a day will not fatigue the urethra. We have found three a day sufficient.

In women, injections may be used with less caution than in men. We refer to injections used in the vagina, when the disease is situated there. When in the urethra, balsam and cubebs must be relied on. A strong solution, say 60 grs. of nit. argent. to the ounce of water should be applied to the whole vagina, either by injection, or better we think with a large sized mop. In these cases some judicious practitioners prefer the solid stick of nit. argent., applied by means of the speculum.

We believe the following rules with regard to the use of injections in gonorrhœa may be safely and confidently laid down:

1. That they should only be used in the first and latter stages of the complaint.

2. For the *abortive* method, 15 grains. nit. argent. to the ounce of water is a better strength than any larger proportion. If there is any change from this, it should be to a weaker solution.

3. That astringent injections should be used in the decline of the disease, to perfect the cure and prevent gleet.

4. That no bad effects result from injections properly administered.

ART. IV.—*A Statement of the Facts in a Case of Dislocation of the Femur into the Foramen Ovale, Probably Complicated with Fracture of the Acetabulum, and Presenting Unusual Difficulties in Diagnosis.* By CHARLES BELL GIBSON, M. D., Professor of Surgery in the Medical College of Virginia.

On 6th April 1854 Mrs. —— was violently thrown from her carriage and received an injury about the right hip. Dr. Archer of Chesterfield, who observed the accident, assisted the lady into a neighboring house, and after dressing two slight wounds about the face, made an examination into the nature of the injury to the hip. In a letter which I received from him, he states that he "very carefully made an examination by comparing the lengths of the two extremities and found that there was a lengthening of half an inch of the injured side, causing me to believe there was either fracture or luxation." In the course of an hour, perhaps, Mrs. —— was placed in a carriage and conveyed to her residence about a mile distant, and I visited her three or four hours afterwards.

I found her suffering much pain, and alarmed at the idea of a serious injury; and from her description of the accident, and the opinion which Dr. Archer had expressed, I expected to find one or other of the injuries mentioned. Placing her in the most favorable position for a rigid investigation, with the greatest care I examined the lower extremities, and found them to correspond exactly.

The trochanter, knees, ankles and feet were carefully compared, but I could detect no difference in the two limbs. There was no eversion nor inversion of the foot, no abduction of the limb, nor any inclination towards the other. The movements of flexion and extension, of abduction and adduction, and of rotation were all performed with natural ease and freedom. There was no crepitation, and, in short, nothing was elicited by the examination calculated to excite the belief that fracture or dislocation of any kind had occurred. Pain was produced, it is true, but not more than would result from moving parts which had received severe contusion, and this only I accordingly believed, and pronounced to exist. It may not be surprising that I relied entirely upon the correctness of this opinion, because forewarned of supposed serious injury, and long familiar with the difficulties of diagnosis in injuries of this region, and with the great importance of accuracy, I

gave to the examination peculiar circumspection. I advised rest for a few days, an anodyne, and some soothing applications to the contusion, and took my leave.

On the 23d of April, seventeen days after the date of the accident, having heard nothing in the mean time of the case, I was requested to visit Mrs. ——. I found her sitting in a chair, not suffering much pain, and able to walk a little about the room by the aid of a cane. She complained of stiffness in attempting to walk, which I accounted for by the presence of the effusion consequent upon severe contusion, and advised the use of moderate frictions. I made no examination of the limb, relying entirely on the correctness of the first one, and having no apprehension of serious injury.

On the 28th April I was again requested to see Mrs. ——, and only then learned that she thought the right limb certainly longer than the left. Upon examination I instantly discovered that it was indeed two inches longer, and upon carrying the hand to the upper and inner aspect of the femur, the head of the bone was distinctly felt occupying the foramen ovale. Rotation of the limb produced movement of the head of the bone, so that there could be no doubt as to the occurrence of dislocation. The other symptoms, however, of dislocation in this position were absent. There was no separation of the limbs, which is almost an invariable symptom, nor was there any forward inclination of the body—produced as it is by the extreme stretching of the psoas and iliacus tendon. The absence of these symptoms I accounted for by the fact of the extreme laxity of the whole muscular tissue of the patient, and her emaciation—the consequence of years of ill health. It may be easily imagined that the discovery of this dislocation was most painful to the patient as well as myself, for my confidence in the utter absence of serious injury had naturally had the effect of banishing all fear of it from her mind. She consented to the operation of attempting reduction, and I invited Dr. D. H. Tucker to assist me.

We attempted reduction by means of the pulleys; but after continuing their use for half an hour, without moving the bone, we determined to defer the attempt until the next day, and then to renew it with the assistance of chloroform.

On the 29th the attempt was renewed, Dr. Tucker being present, and also Dr. Marx, who had been invited to join us. Chloroform was administered, and extension made with pulleys in the usual manner for reducing this dislocation.

Finding, after an hour had been thus employed, no advance of the

head of the bone towards the acetabulum, I determined to place the patient on her side, and to make extension from the upper part of the femur perpendicularly upwards, at the same time pressing down the knee and foot to prevent the lower part of the limb from being drawn with the thigh bone.

Before, however, the necessary arrangements could be made for this, and whilst waiting for them, I took hold of the leg, and, flexing it, carried it across the knee of the sound side, and that moment felt and heard the head of the bone, distinctly, pass into the acetabulum. Dr. Tucker, whose hand was on the trochanter, at the instant exclaimed: "*It is reduced.*" This event produced no little excitement and rejoicing to us all, but in the midst of it we did not forget to compare the two limbs. The unnatural length had disappeared. Mrs. —— was carefully lifted from the table upon her bed, and the limbs being flexed, were placed upon a double inclined plane, and after directing an anodyne we retired. I saw her the next day, 30th, and the next, 1st May, and remarked some œdema about the limb and more than ordinary suffering, but attributed them to the operation of the 29th.

I continued to visit Mrs. —— every day, or every other day, when on the 8th May I was struck with the appearance of the right knee (that of the injured side): lying on the inclined plane side by side with the left limb; it certainly appeared to be the shorter. I called the attention of Drs. Marx and Tucker, who happened on that day to be present, to this singular shortening.

Mrs. —— had by this time suffered a great amount of pain, and her case had presented such a variety of forms that her spirits had become very much depressed, and she refused to submit to any further treatment, or even to have an examination made into the cause of this new symptom. By dint, however, of persuasion she at last, on 11th May, consented to such an examination as would lead to an explanation of the shortening of the limb. This was scarcely commenced, when the pain produced was so severe as to cause her to complain very much, and to induce her husband to refuse any further interference on my part with the case. With sincere regret I felt it my duty to retire from it at once. I was not invited to return to it, and do not know Mrs. ——'s present condition.

In September Mrs. — was taken to Philadelphia, and there had the limb examined by Dr. Norris, who expressed the opinion "that her bone had been broken," as he has informed me in a recent letter.

To the surgeon the report of this case cannot but prove interesting, exhibiting, as it does, anomalies perhaps unparalleled.

It will be remembered that Dr. Archer found a lengthening of half an inch in the injured limb, and that four hours afterwards I could not observe it, nor indeed any symptom indicating fracture or dislocation. For sixteen days nothing occurred to render either injury suspected. On the 17th day palpable evidences of dislocation into the foramen ovale existed; on the 18th day the dislocation was reduced. On the 9th day after reduction, shortening was observed—implying fracture of the neck of the bone during the attempted reduction, or an upward dislocation, or fracture of the superior rim of the acetabulum.

Supposing Dr. Archer and myself to have made equally careful examinations, it is clear to my mind that some change must have occurred in the limb in the course of four hours, for he found lengthening, and I none. Inasmuch, however, as lengthening is proved to have existed 17 days afterwards, though to a much greater extent, surgeons may insist that my examination, however careful, was defective, and that symptoms of downward dislocation *ought* to have been found at first. Remembering, as I well do, the extreme solicitude with which the examination of 6th April was conducted, it is very hard to admit this much—but how else explain the difficulty?

I could save the reader and myself some trouble, somewhat in the same way, if I admitted that the shortening which was discovered on 9th May, was produced by fracturing the neck of the bone on the 29th April—but I think I can prove that it was not; and possibly I may explain how it was produced.

It has been shown that, beyond peradventure, dislocation upon the foramen ovale existed. Now, if fracture had been produced in attempting its reduction, the head of the bone would have been left on the foramen ovale inevitably. Dr. Norris says: "I could not at the time of my examination feel the displaced head." If it had been broken off, and thereby left on the foramen ovale, he *must* have felt it—so that it is clear the neck was not broken.

But, perhaps, in attempting to return the bone to its socket, it was thrown upon the dorsum of the ilium, or into the ischiatic notch. Either of these would be more difficult to accomplish than the mere return to the acetabulum, but independently of this—in either case shortening would be instant—and deformity of the hip, especially in a thin subject, could not escape notice, and the comparison which we made of the limbs after the reduction must have revealed both. And

besides, Dr. Norris says, that in September, "there was fracture," not dislocation, and he must have felt the bone in either position had it been there.

The only mode in which I can account for the shortening, is by supposing that fracture of the superior rim of the acetabulum occurred at the time of the accident of 6th April. In this way, too, the non-appearance of the shortening at first may be explained. The limbs being placed on a double inclined plane, the position would naturally cause the head of the femur to press against the broken labium of the acetabulum, and by its weight would gradually separate it from the rest of the cavity, thus allowing the head to glide upwards upon the ilium, assisted, it may be, by the same muscles which produce shortening in fracture of the neck of the femur by their attachment to the lower fragment.

In reference to the opinion expressed by Dr. Norris, that fracture of the neck of the femur existed, when he saw the case in September, it must be stated that he had no opportunity of learning from me the history of it, and was obliged to judge of its nature by the symptoms before him. He found the limb shortened, but without eversion, and perhaps heard crepitation, and could not discover the head of the bone; he had a right, therefore, to believe that the shortening was not due to dislocation on the dorsum, or into the ischiatic notch.

I feel convinced that, if he could have been made aware of the undoubted existence of dislocation on the 28th April, and could have been apprized of its satisfactory reduction, he could not have believed that fracture of the neck was the cause of the symptoms which he observed.

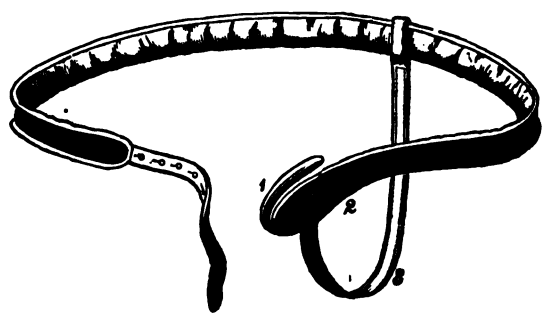
The idea that there was fracture of the neck, *with displacement of the shaft downwards upon the foramen ovale*, I have never entertained for a moment, because we know that displacements in fracture are produced almost invariably by muscular contraction—and muscular contraction in fracture of the cervix femoris can never pull the shaft downwards; also, because if such displacement were possible, the extension employed in the treatment would have easily removed it; and still further, because the *round head of the bone* was felt on the foramen ovale, with almost as much distinctness as it might be on the skeleton.

I am very sure that in expressing his opinion, Dr. Norris did not at all design to disapprove of the treatment employed by me, still less to imply that the injury which he believed to exist had been produced by undue force in the effort of reduction.

ART. VI.—*A Plan for the Radical Cure of Some Cases of Inguinal Hernia.* By PATRICK H. CABELL, M. D., of Selma, Alabama.

Of the different means by which it has been proposed to solve that difficult surgical problem—the cure of reducible inguinal hernia, none appears more rational nor offers fairer chances of success than Dr. Gerdy's method of invaginating a fold of skin into the inguinal canal. The principle of this operation is certainly correct. It aims at obstructing the abdominal ring, the insufficiency of those operations which simply produce adhesions in the sac having long since been tested; the only difficulty is in the execution.

I wish to describe a form of truss which I think calculated to obliterate the inguinal opening in ordinary cases of oblique hernia.



In place of a pad, the inguinal branch of the ordinary truss is made longer than usual(2), and to its extremity is attached a rounded cylinder of soft wood (1) designed to be inserted into the canal, pushing a fold of the skin of the scrotum before it. This finger-like projection of wood is kept up by the pressure of the spring, and displacement is prevented by the circular strap and thigh strap (3).

When the pouch of skin seems to have adhered in its new situation, the surface of the "cul-de-sac" is to be denuded of its epithelium, and then its sides brought together by an ordinary truss with a long pad resting over the invaginated portion.

I do not claim anything new in this method, and am far from vaunting it very highly, for the cases in which I have used it have not been long enough under treatment to enable me to decide on the permanency of

the cure, but I think it cannot be unsafe, and it is free from some of the objections of the ordinary methods, as the patient can walk about during the treatment.

I propose it, then, with much diffidence, hoping that it will be tried by surgeons if they have nothing better.

ART. V.—*A Case of Interrupted Menstruation.* By ROBERT HARRISON, M. D., of Prince George County, Va.

Mrs. S. M., about 35 years of age, eight years ago had a violent attack of phlegmasia dolens, which required considerable time and treatment for her perfect restoration to health. Her general health after a time, however, was perfectly restored except the return of the catamenia which did not occur, but she acquired a corpulency and rotundity not often met with. To restore the interrupted menses, was much desired; for which purpose she was under the management of three physicians of Petersburg, as well as under my own, and was submitted to a variety of treatment, all of which proved inefficient. As a dernier resort I advised the use of mustard poultices to the breast. The efficacy of which I had read of.

After having used the poultices for three days, they were discontinued on account of the local irritation they created; but three days after the poultices were abandoned, the menses made their appearance, much to the delight of patient and practitioner. At the succeeding menstrual period the lady did not use the poultice, because the weather was warm and the poultices disagreeable; the consequence was a menstrual return. At the next regular period they were recurred to with the same happy result. On subsequent occasions, without the use of these agents, the menses regularly appeared, and the health of the individual was perfectly good.

Now this case fully establishes (as far as one case can establish anything) the efficacy of the remedy used. It should be remembered that an interruption had existed for eight years under the frequent exhibition of the most potent remedies of the materia medica, but immediately the poultices were resorted to success crowned our efforts.

[We have in the history of this case an evidence of the sound phil-

osophy and practical results to be derived from the careful study of the *laws of sympathy* which seem to connect together, various portions of the animal economy. Just as the new born babe when applied to the breast, is the invariable excitant of uterine contraction, and a sure preventive of hemorrhage; just as the application of the breast pump to the gland will produce dilatation of the os uteri and abortion; so in this instance the stimulation of the mammary gland, succeeded in rousing the uterus to the performance of its proper functions, after it had resisted the most positive and direct remedial efforts which medical skill could suggest.

The remarkable efficacy of the leaves of the "ricinus communis" or castor oil plant, when applied to the breast, in producing a restoration of uterine functions, has been the subject of attention, and many experiments have been made to ascertain whether these leaves possess any specific virtues. Whilst it is generally supposed that the warmth engendered by these applications has been the probable cause of the sympathetic uterine action, yet the experiments of Dr. Maclagan of Edinburgh and others seem to shew that the leaves of the "ricinus" possess this power in a very marked degree.

We are also informed that in the Cape de Verd Islands it is customary not only to use the topical application of the leaves of the "ricinus" to produce uterine excitement, but the converse of the proposition holds good; that these leaves when applied to the genitals and uterine region will bring on *lactation*. Not only have they the power of producing the secretion of milk in the female breast, *even when the subject has never been a mother*, but there are cases well authenticated where the topical application of the "ricinus communis" to the scrotum and genitals, has developed the lacteal secretion in the *male*, and the flow of milk has been rendered sufficiently abundant to become a source of profit to the individual.—Ed.]

LECTURES.

I. *Lectures on Fever.* By WILLIAM STOKES, M. D., Regius Professor in the University of Dublin.

LECTURE X.

There is a case in the small fever ward to which I would wish to direct your attention. Although the patient has convalesced after a long fever, and is now gaining flesh and strength, we have found that the pulse continues rapid. Now, this is a circumstance which must always excite suspicion. In this patient, the signs of abdominal and pulmonary lesion have disappeared, as well as the characteristic expression of what may be termed the condition or state of fever,—yet, we find that his pulse does not correspond with the signs of improvement in all the other functions. It was suggested by Laennec, that the rapidity of pulse in patients after fever might depend on softening of the heart; but we shall see by-and-by, that the true typhous softening of the heart, so far from inducing rapidity of pulse during convalescence, has much more frequently the effect of making it slow; not only slow as considered with reference to the condition of health, but actually falling below the ordinary standard.

Such of you as have studied Laennec's great work will remember, that, in speaking of softening of the heart generally, he states that he found it soft in certain cases of putrid fever; but he held this to be merely the repetition in the heart of the universal degeneration of the muscular structure, to which he gives the name of fishy state of the muscles (*l'état poisseux*). I have little doubt that Laennec met with true typhous softening of the heart; but he misinterpreted its nature. You may take it as an established fact, that in typhous the heart may be softened to the most extreme degree, while the voluntary muscles remain intact. And you may further rest assured of the truth of this maxim, that rapidity of pulse in convalescence, so far from indicating any remains of the typhus disease in the muscular structure of the heart, is in most cases to be taken as a proof of the existence of some lurking disease, either of the entire system or of some important organs. I say, in most cases, for we sometimes meet with instances in which this cannot be discovered, and where the quickness of pulse seems as if the heart had, as it were, contracted a habit of rapid action, which it requires time to get rid of. But these cases are exceptional;

and whenever you find rapidity of pulse in a patient who has thrown off his fever, you are to take the alarm. These cases of quickness of pulse are two kinds. In one class the pulse has never lost the rapidity it attained during the fever; or it has, perhaps, come down fifteen or twenty beats in the minute, and its rate then remains stationary. In the other cases the pulse, which had become quiet, rises to 100 or 120, or even higher, and remains at that rate for days together, without our being able to detect any cause for this increased rapidity. This, I think, is the worst case of the two; at least, it appears more often to indicate a new pathological change.

The local diseases which have been found most frequently to attend this condition are of two kinds; one of them is tuberculosis—the deposition of tubercles in the lungs and other parts; the other is the existence of a secondary re-active inflammation in the mucous glands of the intestines. To this subject Dr. Cheyne long ago drew attention, in speaking of imperfect convalescence in typhous fever; and he gives several cases in the Report of the Hardwicke and Whitworth Hospitals, in which patients had recovered well from typhus fever: had to all appearance, regained a certain degree of strength: had regained their appetite: but they showed no disposition to leave their bed; the pulse gradually got quicker and quicker: the belly swelled; diarrhœa came on; and the patients died with symptoms of disease of the intestinal canal. Upon dissection, extensive ulceration of the mucous glands was found in the intestine. These are the two most common of the local diseases which you should suspect when you have a patient who has gone through a long fever with the pulse continuing or becoming very quick.

But now suppose that you examine such a patient with great care. You percuss his chest: you examine the state of his respiration in every way, and you cannot satisfy yourself that there is any disease in his lung; and you will recollect what I mentioned to you at our last lecture, that in most cases of this tuberculosis after typhus there is great constitutional suffering. Well, you may make up your mind, from the absence of all these signs, that the patient is not becoming tuberculous, at all events. When you proceed to examine the abdomen, you will find, perhaps, that he has a good appetite; that his thirst is gone; that the belly is hollow and soft, and there is no tumefaction of it; that there is no tenderness on pressure anywhere; no throbbing of the abdominal aorta; no tendency to diarrhœa—in fact, no one symptom of disease of the mucous membrane of the intestine. And yet, as in the case above stairs, you have a pulse with this unpleasant degree of quickness. I rather think that this man's pulse is now quicker than it was on the 21st day of his illness; and it makes me extremely uneasy about him. Now, gentlemen, suppose that you did not find either disease of the lung or disease of the abdomen; what should you suspect? Generally, in those circumstances, you may suspect that the patient will be attacked by phlegmasia dolens; for we have seen a considerable number of cases in which, after fever, where the pulse continued rapid, this disease exploded. It is, I think, more likely to

occur in the non-petechial than in the petechial cases; it is more likely to occur in the long fevers than in the short fevers; it is very liable to arise in patients who have had a fever running on beyond twenty-one days, or thirty days, or forty days. In these patients, after the true symptoms of fever have subsided, they remain with a rapid pulse, and probably, in a week or ten days, symptoms of phlegmasia dolens come on; and the disposition to this venous inflammation is very curious in them, for you will very often find that the patient has two or three distinct attacks of it. It may affect one leg, and you will get the patient through that attack; still the pulse does not regain its natural rate. After a week or ten days, the other extremity will be attacked; and it is even possible that a third seizure may occur, as it were, a relapse of the disease in the part first affected; and in this way patients will go on labouring under these attacks and their consequences for months together. In most instances, however, the patients recover. In most of the cases I have seen, of this acute phlebitis consequent upon fever, there was distinct notice of the invasion of the disease—that is to say, the patient was attacked with pain in the calf of the leg. He was attacked, say in the course of the night, with pain in the calf of the leg; and, when you come in the morning, you find him exhibiting all the characteristics of the disease—a large swelling, pain on pressure, and all the other symptoms. Sometimes you find a cordy state of the superficial veins; at other times not. When you can feel a deep-seated vein, you will sometimes find it in a hard and cordy state.

I think it right to warn you of these curious circumstances; for I am sure that in the course of your practice you will often be in this position—that you will have a patient recovering from fever, and going on in every respect well, except that the pulse does not come down. The rule, then, is, that if the most minute examination fails to detect disease in the great viscera, you may expect the occurrence of phlebitis.

The term phlegmasia dolens, under these circumstances, is not always applied correctly; for the disease is not always painful. We have seen a few instances in which the discovery of the local affection was entirely accidental. Of course you will not suppose that I am prophesying that the patient above stairs will have phlegmasia dolens; all I say is, that he is in that state which would justify you in suspecting something of the kind.

I have mentioned the rapid deposition of tubercle, ulceration of the intestines, and phlebitis of the extremities, as the diseases we have found to occur most commonly in these instances of unaccountable quickness of pulse after fever. Doubtless there are many more examples of the local disease arising under these circumstances; but the general rule will hold good, that this symptom foreshadows a disease, which, though at first latent, will before long become manifest. These diseases are generally attended with much irritation, and the condition of the patient is rather one of irritation, or inflammation if you will, than of essential fever. And this is one of the illustrations of a circumstance often observed by the clinical investigator, namely, the

change of character of disease, locally and constitutionally in the same patient, and within a not very extended period. The typhous condition, generally considered, will change into a different state. The essential or general morbid state will disappear, and a local irritation, with its symptomatic fever, becomes the prominent malady. Nay, you will sometimes find that the very condition of a local disease, formed during the first, the typhous, or essential period of the disease, will itself change, and take on the characters of what is termed by some a "healthy inflammation." You may sometimes see this well illustrated in that terrible disease, accompanied by purulent deposits, in many of the articulations. The patients may throw off the typhoid state which attends the earlier periods of the disease, and then the affection of the joints seems to change in its nature, and take on the characters of ordinary arthritis. I have only seen this, however, where one or two of the larger joints had been affected with the primary disease; and it was most remarkable to witness the changes both in the constitutional state and the local affection. It was no longer necessary to use general stimulation; it was no longer improper to employ local antiphlogistic measures.

You will see, in the article on "Hepatic Abscess," in the "Cyclopædia of Practical Medicine," a case which we may well study in connexion with this subject. The patient was a middle-aged man, who was attacked with the yellow fever, of which we had such striking examples in the epidemic of 1827 and 1828. You will find a valuable account of this disease in Dr. Graves's "Clinical Medicine." This patient was the first who was saved. The treatment which I adopted on the appearance of the jaundice and the spasms of the belly, was the free application of leeches to the abdomen, the use of calomel and opium in full doses, and a liberal allowance of wine. The man recovered, to our great surprize; but whether from measures employed, or from the circumstance that the epidemic was then losing its malignity, it is difficult to say. However, his recovery seemed perfect; the pulse became natural; the yellowness rapidly disappeared; there was no gangrene of the limbs or nose; and he was finally discharged, to all appearance quite recovered.

Within a fortnight he again applied to be admitted. He was evidently very ill. The pulse was rapid. He had copious sweats. The breathing was hurried, but not laboured, and he had a hacking, dry cough. I at first suspected that his case was one of the acute consequent tubercle which I have already described to you. I could discover no signs of abdominal disease, and the physical examination of the chest repeated with great care, from day to day, gave results very different from those which we had observed in the acute deposition of tubercle after fever. There were neither the intense and persisting bronchial râles, nor the progressive dullness; and so I remained in that most unhappy of all positions to which we can be exposed, namely, that of having to treat an acute disease, of which we know neither the seat nor the nature. However, the suspense did not last long. In a few days, and at the time of visit with the class, I found him coughing

up purulent matter, and the nurse showed us a vessel which held more than a pint of the same fluid, which the patient had coughed up during the night. The expectoration had come on suddenly. On the day before I had made a most minute examination of the chest, both anteriorly and posteriorly, and had failed to discover any sign of disease. Yet we now found that the posterior portion of the left side, as far as the scapular spine, was absolutely dull. There was no bronchial respiration; no resonance of the voice; and I think no râle. We came to the conclusion that an abscess, probably of the liver, had opened into the chest. I will not go into the details of our treatment, which was that usually employed in cases of internal suppuration. The patient rapidly recovered, and left the hospital without the slightest physical sign of disease, either in the chest or belly. During the next ten years I had repeated opportunities of seeing this man, who continued to enjoy the most perfect health.

This case is well worthy of your careful study: it shows, in the first place, that rapidity of pulse, after convalescence, probably indicates some profound lesion; next, it shows that we were right to pause in the diagnosis of acute tubercle, when there was a want of correspondence between the physical signs and the constitutional symptoms. It is an additional illustration of the possible existence of hepatic abscess, without perceptible hepatic tumour; and, lastly, it is remarkable, as being the only instance during that singular epidemic tendency to yellow fever, in which organic change of the liver seemed to occur. Dr. Graves dwells strongly on the point, that in none of our dissections did we find the marks of hepatitis; and it is quite possible that, even in this case, during the violence of the first attack,—that is, when the patient had the yellow fever, the liver was not inflamed, and that its subsequent suppuration may have been owing either to abdominal phlebitis, or may have been purely the result of a pyogenic diathesis. I assume that the abscess was in the liver; but even this is not absolutely certain. It assuredly was not originally in the chest; and whether the purulent matter made its way into the lung by a perforation of the diaphragm, or whether the case was an example of the vicarious action of the lung, thus removing the purulent matter from the liver, is a question which can never be determined.

As I have alluded to the invasion of phlegmasia dolens after fever, I may mention a case which occurred many years ago in this hospital. All know that intermittent fever is a rare disease in this country. It is not endemic in our vast mountain districts, nor in our level boggy plains; and, indeed, for many years we never had a case of ague in Hospital that did not occur in the person of one of the labourers who go to the fenny districts of England to cut the harvest. These men are often attacked with ague on their way home; the disease being immediately excited by the cold, wet, and fatigue, to which they are exposed on their journey. At the close of the epidemic of 1828, intermittent fever became very general; in fact it was epidemic, and for a time almost every case in our wards was an example of some form of ague. It was at that time that I tried the treatment of bleeding, in the cold

stage, as recommended by Dr. Mackintosh. Our results, in a very large number of cases, were decidedly opposed to the practice. Now, at the time when the wards were filled with ague cases, a patient was admitted with symptoms of tertian ague. As was natural when so many cases of the same form of disease were in the house, this case did not excite any special attention, and the man was ordered quinine in the usual doses. But the disease did not yield to the specific; on the contrary, the paroxysms became more severe, and the type of the fever changed to that of the quotidian ague. I then became alarmed. I stopped the use of bark, and proceeded to make a careful examination of the patient. I found no signs of disease in the chest or belly, but it happened that in throwing off the bed-clothes for the purpose of examining the lower part of the abdomen, we accidentally exposed the lower extremities. I found the thigh and leg at one side greatly enlarged. The whole extremity was white and elastic, and the saphena vein was in a cordy state. Now this man had never once complained of any local pain or uneasiness; and was as much surprised as we were at the state of his limb. He was treated by leeching, and the use of calomel and opium, and speedily recovered. He had no paroxysm of the fever after the change of treatment.

I have hardly a doubt that this patient's life would have been lost but for the circumstance that we omitted the quinine in time. Not that I wish you to suppose that the phlebitic swollen leg after fever is itself a very dangerous disease; for we have no reason to think it more so than ordinary phlegmasia dolens; but I believe that the persistence in the use of bark in cases of simulative ague, is fraught with danger. Indeed, there is here a double danger, for we thus not only neglect but exasperate the acute disease.

You are all familiar with the intermittent fever, which is symptomatic of urinary disease. On this subject, and on the danger of taking the affection for ague, and treating the case with bark, the late Mr. Colles used to dwell with great force in his lectures on Surgery. There are, doubtless, many other instances where a local irritation excites a fever, which for a time at least, has all the characters of a regularly intermitting fever. Puerperal women are liable to this disease; I do not allude to the true puerperal fever; but I have often known women soon after child-birth to be attacked with well-marked tertian, or quotidian fever, in whom it was difficult, or impossible, to discover any local disease of importance. In some there had been an abortive irritation, as it were: perhaps, some tenderness of the uterus, which has been removed by treatment; or, in others, a tendency to inflammation of the breast; but these had subsided, and the intermittent fever persisted. I have over and over seen bark administered in such cases, and always with bad results. The tertian was changed into quotidian, or double tertian—the quotidian into double quotidian, and in one case, where the use of bark was persevered in for a length of time, the patient sank with symptoms of inflammation in the abdomen and the lungs. I believe that for the treatment of this condition we should trust to change of air, good diet, and opium. I have known one case

in which the practitioner had given bark to a great extent, with the effect of exasperating all the symptoms, in which, when he omitted the medicine, and used draughts of valerian, ether, and opium, the disease rapidly disappeared.

II. *Lectures on General Physiology.* By CLAUDE BERNARD.

LECTURE VI.

SUMMARY: *Vis nervosa*—Rate at which Nerve-force is transmitted—Centrifugal and Centripetal Nerve Currents—Direct and Reflex Actions—Voluntary and Involuntary Reflex Actions—Conditions which exalt or depress Nervous Activity.

After showing that sensibility, as Haller understood it, is the essential property of nervous tissue, and that nerves are divisible into three species, designated nerves of sensibility proper, motor nerves, and trophic nerves, we briefly described, at the end of the fourth lecture, the structure of nerves. It remains for us now, pursuing the course which we adopted in regard to the muscular system, to study the mode of action of nerves.

Many researches have been made to determine what was the agent, the peculiar force that, by the medium of the nerves, transmits from the centre to the extremities and reciprocally those stimuli which produce sensations, movements, and secretions. This agent has been compared to electricity; some philosophers have supposed these two forces to be identical, and have regarded the nervous centres as electric piles, and the nerves as a system of conductors. This seductive hypothesis has not stood the test of experimental physiology; it certainly seemed to solve ingeniously the problem which now occupies our attention, but it is proved to have no foundation in fact. We are now quite sure, indeed, that the agent which circulates through the nerves is not the electric fluid; we can prove experimentally that the rapidity with which sensations are transmitted cannot be compared to that of electricity. If we lay bare a nerve of a living animal and excite it, and at the same moment direct an electric current over a magnetic needle, we find that the needle is deflected instantaneously, whereas an appreciable interval elapses before the irritation of the nerve is perceived by the animal and betrayed by a movement of its limb. We can measure the direct action and the reflex action of nerves according as their superior or inferior extremities are irritated, and show by these measurements how greatly electricity differs from the nervous fluid.

The nervous current moves in the frog only 15 to 20 *mètres* (49 to 65 feet in a second, which does not compare at all with the rapidity of the transmission of electricity and light.

The quickness of the nervous current varies little in the motor and sensory nerves, but a very marked inferiority in this respect is noticed in the nerves of the sympathetic system, which act comparatively with extreme slowness.

These experiments are made, it is true, on frogs, that is on animals holding a low rank in the scale, but it is not very difficult to exemplify the same truth by experiments on higher animals. In dogs, for example, we find that the nervous current is conveyed 50 or 60 *mètres* in a second, or three times as fast as in the frog. The rapidity of the nervous current appears, then, to bear a direct relation to the position of animals in the organic scale.

Whatever these differences may be, it appears certain that there resides a special property transmitted at a readily appreciable rate, which is by no means rapid, when compared with the transmission of light and electricity.

We have settled one fact, then; namely, that the rate at which nerve-force is propagated is relatively slow. We can also prove that this force moves in two principal directions; there is a centripetal current and a centrifugal current; there are nerves acting from the periphery towards the centre, and others acting from the centre towards the periphery; the centripetal nerves preside over the sensations, and the centrifugal nerves over the motor functions.

The motor nerves begin to lose their property at their distal extremities, whereas the nerves of sensation lose their property from the centre towards the circumference. For example, if an animal is subjected to the influence of intense heat or cold, or of chloroform or ether, its nerves lose their property in a different order, according as they are motor or sensory nerves.

The action of these agents on the nerves of sensation is first manifested at the periphery, and gradually extends to the centre, that is to the spinal cord or to the brain.

The motor nerves, on the contrary, lose their property first at the centre; they may be entirely paralyzed at the nervous centre, while susceptible of excitation at their terminal extremities.

There are, then, two nervous currents, one centrifugal, the other centripetal, moving in opposite directions, and corresponding to two orders of nerves. There is no antagonism between them, but a mutual adaptation; they unite at the nervous centres to produce successive phenomena of sensation and motion. We can hardly conceive, in fact, of sensation without motion, or of motion without sensation; these two phenomena constantly exhibiting towards each other the relation of cause and effect. It has been long known that if a motor nerve is irritated, muscular contraction is produced, and that the same phenomenon is manifested if a sensory nerve is irritated, that is to say that irritation of a nerve of sensation reacts on the muscles, constituting what is termed a *reflex action*. We therefore distinguish two movements; the one direct, resulting from excitation of a motor nerve; the other reflex, resulting from the excitation of a sensory nerve.

This reflex movement may be voluntary, but it is not so necessa-

rily, for it may be manifested in animals deprived of spontaneity, as is demonstrated in the following experiment.

The professor placed a living frog on the table; if one of its limbs was touched, it immediately withdrew the limb by a voluntary movement. The frog was then decapitated. It remained perfectly motionless, but preserved its equilibrium; when irritated by the contact of forceps, it moved, but its movements were aimless, without any determinate object.

This experiment proves that reflex movements may be produced independently of any exercise of volition.

If we direct our attention to ourselves, we perceive movements which are subjected to our will, and others which we can neither produce nor prevent; such are the movements of the heart, of the intestines also, which are produced by reflex actions analogous to those which we have observed in this frog.

If a nerve of sensation is cut across, its terminal extremity may be irritated with impunity, no reflex action, and consequently no movement, is produced; but if, at the place at which the nerve is divided, we irritate the centripetal end, muscular movements speedily indicate that the sensation has been propagated to the nervous centre.

The difference in the rapidity of direct and reflex actions has been measured. It has been shown that direct actions are effected twice as fast as reflex actions. If a reflex action is propagated at the rate of eight or ten yards per second, a direct action will be conveyed at the rate of sixteen or twenty yards in the same time: which clearly demonstrates that there are two currents, and that their rate of transmission is the same.

We have demonstrated that reflex actions may be produced without the intervention of the will, a fact that may be observed in the human species also, in the muscles of animal life; for, in certain disorders, in certain convulsive diseases especially, these muscles contract in spite of the will; the individual cannot control his own movements.

Such convulsive movements, which the will is powerless to repress, may be produced by strychnia. This substance acts on the nerves of sensation alone; its action consequently is reflex; the convulsions under these circumstances may be prevented by cutting the motor nerves; the same result will ensue if we cut the sensory nerves; it is thus that we demonstrate that there is reflex action.

The points of communication between the sensory and motor nerves are situated in the nervous centres, probably in those corpuscles which we have described as having several nervous tubes diverging from them.

Reflex actions are not peculiar to any single function, but common to all. We have shown that they were independent of the will. The decapitated frog on the table no longer possesses volition, and yet he reacts when irritated by external impressions; the agents which are employed to produce these reflex movements experimentally are either physical, chemical, or mechanical; electricity and acetic acid are the

most convenient for the purpose. When stimulated by these agents, the animal feels but has no consciousness of its sensibility. It has been objected to this assertion, that it is impossible to know that the animal is unconscious under these circumstances. Facts in clinical medicine furnish us with a reply, for, indeed, diseases often work out experiments for us, and the misfortunes which afflict our race are often full of instruction for the physiologist. We observe, then, that when the continuity of the spinal cord is destroyed in the human subject, by accident or disease, and the limbs are consequently shut off from communication with the cerebrum, the same phenomena are manifested as in the decapitated animal; if the feet are touched, they are drawn up, but the individual is unconscious both of the sensation and of the movement.

The integrity of the organ of thought is therefore proved to be not indispensable to the production of reflex actions; but it is requisite that there should be integrity of the spinal medulla and of the two orders of nerves; if the sensory nerves are wounded, sensation ceases; if the motor nerves undergo morbid change, motion is impossible; that either one or the other may take place, it is necessary that the cord should be intact. If we destroy this nervous centre, all action is at an end.

The professor removed the spinal cord from a frog; the animal was at once motionless and insusceptible of excitation.

There are two classes of reflex movements; the one manifested in parts controlled in a measure by the will, the other occurring in organs over which the will has no influence. In some cases there is antagonism between voluntary and reflex movements.

All the reflex movements which are developed in portions of the body under the influence of the will, proceed from the cerebro-spinal centres; but there are other reflex movements of which neither the brain nor the cord is the centre, but which proceed from the ganglia of the great sympathetic, and these are entirely removed from the control of the will. For example, if an irritant is introduced into the alimentary canal, for the purpose, we will suppose, of producing purgation, movements will presently be manifested in the intestine; these movements arise because the sensory nerves have transmitted a sensation to the sympathetic ganglia, and the motor nerves in consequence of this stimulus have produced contractions in the intestinal muscles, reflex movements which we cannot arrest by any exertion of the will. The conclusions of physiology are here supported by anatomy; the central nervous system presides over the reflex actions in which the will may intervene; the sympathetic system acts on organs over which the will has no control; in all cases, reflex movements arise in the same manner, by the intervention of centrifugal and centripetal nerves* and

* Terms corresponding to Dr. Marshall Hall's *eisodic* and *exodic* nerves; see the lecture published by that eminent physiologist in the tenth number of the VA. MED. AND SURG. JOURNAL, vol. ii, 258 *et seq.*, in which the subject of reflex *phenomena is fully discussed.*

a centre, whether this centre be the brain or spinal cord or one of the sympathetic ganglia.

As regards the principle which circulates in the nerves, we are compelled to admit a special force, having no analogy to any other force with which we are acquainted. It was once thought, as I have already mentioned, that this force was identical with electricity. There was an appearance of truth and a certain seductiveness about this hypothesis, many things being so arranged as to favour it. The nerves resemble conductors, being composed of an envelope and central filament of axis, and between the two a fatty matter which might be supposed to constitute an isolating apparatus, permitting the central axis to conduct electricity undeviatingly. But, as I have said, this hypothesis may be disproved by various experiments. One of the best consists in simply ligating a nerve; a ligature would not interfere with the passage of electricity, but it promptly interrupts nervous communication.

Here M. Bernard laid bare the sciatic nerve of a frog, and tied a thread around it; the animal then moved along the table, dragging after it the motionless limb, the principal nerve of which had been tied.

We admit, therefore, a peculiar force resident in the nervous system. It remains for us to examine the conditions which destroy or exalt this force.

Curare kills the nervous system, so to speak, without altering the substance of the nerves. Many poisons destroy life only by their action on certain systems of organs whose functions they interrupt. Those which act on the nervous system cause death rapidly. Curare kills the very instant that it is absorbed. Other agents, opium for example, act by depressing the nervous system. These, in small doses are medicines, in large doses they are poisons; the difference between their medicinal and toxic effect is in intensity, not in kind.

There are, then, substances which destroy, and substances that enfeeble, the nervous system; there are other substances which increase nervous activity; such is strychnia which so stimulates the nervous system as to produce death through exhaustion. Ether, chloroform, cold and heat depress the nervous system, all of them acting in the same way, on the sensory nerves primarily and through them on the motor nerves, in the physiological order. Ether, for example, when inhaled by an animal produces: 1, insensibility in the skin; 2, immobility.

Chloroform is endowed with the power of *killing* the nervous system; it acts on the sensory nerves first; at this stage, you may irritate, burn, or destroy the skin of the animal without arousing its sensibility; but if you irritate a motor nerve, you observe movements in the muscles to which it is distributed. Evidently, if we desire to preserve the life of the animal, the action of chloroform must not be carried farther than this; while nervous power is only partially destroyed, the evil is not irreparable, but if it is suspended completely, life ceases; if the motor nerves are paralyzed, the motion of the heart can go on no longer, and the animal dies.

We see, then, that in the pathological as well as in the physiological state, the action proceeds from the periphery to the centre and rebounds from the centre to the periphery; there is a chain, so to speak, commencing at sensation and terminating at motion; death first invades the sensory, and then subdues the motor nerves; strychnia impresses the sensory nerves, and its stimulus is reflected through the motor nerves, so that this agent ultimately produces its effect on the entire nervous system.

Thus, all the substances which depress or exalt nervous activity have always the same mode of action.

III. *Lectures on Hernia.* By J. F. MALGAIGNE, Professor of Operative Surgery to the Faculty of Paris, Surgeon to the Hospital St. Louis, etc.*

LECTURE V.

On the Operative Methods for the Permanent Cure of Hernia.

The various operations which have been devised for the radical cure of inguinal hernia may be included in two categories: those invented prior to the commencement of this century, all of which have reference to the external ring; and those of more recent date, in which, at last, the existence of an inguinal canal seems to be recognized.

Castration.—The first method which suggested itself to the empirics who, in old times, monopolized the treatment of hernia was extremely simple; there was an hernia in the scrotum: well! they cut off the scrotum and the testicle too. This procedure was expeditious, certainly, but its results were very far from being uniformly successful. It was a very popular method, and even after the invention of trusses, thousands were subjected to it. It was generally employed, not only for the cure but the prevention of hernia, until the commencement of the seventeenth century; but about this time, Fabricius of Aquapendente relates that trusses were used more extensively, and that Horace of Nortia, a famous castrator of the day, complained that his profession was ruined, for he then only removed 15 or 20 wretched testicles a year, instead of two or three hundred, which had formerly been his annual harvest.

In 1840, there were still some itinerant charlatans who practised this barbarous operation in the departments of France.

Richter says that German physicians of his day cured hernise by this method, and that the loss of testicle is not so great a price to pay for

* See Vol. III, p. 39, p. 229; p. 334; p. 485.

the relief of such an infirmity. It is probable that he did not have an hernia to be operated on, else he would not have expressed himself so lightly.

No doubt this mutilation, irrational and barbarous as it appears, procured some cures. The external ring, being no longer traversed by the cord, or stretched by the weight of the testicle, may be supposed to contract somewhat, and the male subject, submitted to this operation, enters into the female category, and becomes four times less liable to hernia than he was before. It is possible, too, that the cord in retracting, and carrying a bleeding surface into the inguinal canal, may become covered with plastic lymph, may contract adhesions, and may excite an inflammation, which, by propagation to the internal ring, may obliterate the neck. But the contraction of the external ring required a long period, the obliteration of the neck was an exceptional occurrence, and before either of them was accomplished the hernia usually returned.

Ligature.—Another method was called the *punctum aurum*; it consisted in laying bare the sac and cord, and encircling them with a golden wire, which was gradually tightened until it cut itself out. The patient was left with a testicle deprived of its vessels.

Spanish Method.—An itinerant Spaniard, whose name has not come down to us, attempted the radical cure of hernia by forcing the testicle into the abdomen, and sewing up the integuments below. According to some accounts, he incised the sac, and practised the *punctum aurum*, after getting the testicle within the abdomen.

Suture.—In the seventeenth century, Ambroise Paré denounced the practice of ablation of the testicle, "that organ" (and he calls it by a very vulgar name) "which preserves peace in the household"; he devised the operation of dissecting the sac from the cord, and tying it at the external ring. Other surgeons preferred several stitches to a single ligature, and, after isolating the sac, they sewed up a portion of it with the continued suture. They called this the *royal suture*, because it left the patient the ability to increase the king's subjects. Cures were doubtless attained by this method; inflammation, however induced, may extend to the internal ring and cause its obliteration; it may also extend to the peritonæum, and it often did so in the cases in which the royal suture was practised.

Petit's Operation.—You know that J. L. Petit advised that in the operation for strangulated hernia the structure should be relieved without opening the sac; a practice resorted to by Monro, in more modern times by Key, and still warmly advocated by Mr. Luke, of the London Hospital. Petit proposed further, that after the intestine was reduced, the sac itself should be returned into the abdomen, where it would probably contract adhesions and constitute a barrier. The idea is quite plausible, but its execution almost certainly involves the development of peritonitis. I acted on it once. The idea occurred to me while operating on a woman with strangulated crural hernia; the patient succumbed, but not from the cause I anticipated; suppurative inflamma-

tion had extended to the iliac fossa. I shall never attempt the like again.

Cauterization—After the destruction of the sac by the ligature and the bistoury, there was nothing left but to extirpate it by actual and potential cauteries, and this was accordingly done. You will find a historical account of this method in the annals of the Academy of Surgery. It was condemned in very plain terms by that learned company.*

Very recently, M. Valette, a surgeon of Lyons, has executed a new method of cauterization, in which, he asserts, all danger of injuring the spermatic vessels is avoided. A kind of slab of ebony is forcibly crowded into the inguinal canal, the skin of the scrotum being pushed before it; a needle is glided along its internal surface, and is made to emerge towards the superior portion of the inguinal canal, and its thread is passed through an aperture in a wooden disk which is applied externally. By tightening the thread the slab and disk are brought into close apposition. They include between them the anterior wall of the inguinal canal. An aperture or fenestra is practiced in the anterior disk, in which Vienna paste is put. The soft parts between the two slabs, so far as they are left uncovered by the external slab, are consequently destroyed. An eschar is produced involving the whole anterior wall of the canal, which is replaced by a firm cicatrix. During this process, M. Vallette contends that adhesive inflammation is developed in the sac. M. Vallette's own experience proves that it is not possible to limit the action of caustic by his method, and that notwithstanding the frightful wound it produces and the dangers it involves it is not uniformly followed by success. No other surgeon, that I know of, has practiced M. Vallette's operation, which, it must be admitted, has little to recommend it.

Belmas' Method.—A plan for the cure of hernia devised by M. Belmas is exceedingly odd and strange. It is a method which makes one wonder how its author ever came to think of it,—something unique in pathological physiology. When the sac of a scrotal hernia has not formed adhesions, it may readily be pushed up to the external ring. In M. Belmas' method, then, the hernia was reduced, the sac pushed up, and a slight incision was made in the skin of the scrotum, through which a canula was introduced and gently insinuated between the cord and adjacent parts until it reached the external ring. A long needle was passed through the canula, and brought out at the external ring; the thread of this needle was attached to a little pouch of gold beater's skin. This pouch was drawn up to the ring, and by means of a small tube it was expanded with air. Thus a plug was placed at the external ring. The subsequent results were very curious. Plastic lymph was thrown out in consequence of the presence of this foreign body, and this lymph passed through the goldbeater's skin, in accordance with the laws of endosmosis, and became organized within and without

* The author refers to a report by Bordenave, in which the dangers of the operation of cauterization are fully exposed. See *les Annales de l'Académie royale de Chirurgie*, T. v., p. 651. *Translator's Note.*

the pouch. Thus an organized plug was placed at the outlet of the inguinal canal. M. Belmas practiced his operation repeatedly on dogs, for hernia is not uncommon in these animals, and his results were often successful. He tried it once on the human subject. The patient died of peritonitis, and the experiment has not been repeated. M. Belmas has told me that his idea was entirely empirical. It is evident, indeed, that none of the methods for the cure of hernia could have suggested such a singular contrivance.

Bonnet's Method.—A much simpler operation, recommended by M. Bonnet, of Lyons, is performed as follows:—A pin, passed through a piece of pasteboard or cork, is introduced through the integuments, passed behind the neck of the sac, and brought out through the skin; another pin is passed in front of the sac; and a third behind it. Other pieces of cork are placed on the points of these pins; by approximating the corks, the opposite sides of the sac are brought into close apposition. The pins are left in place for about six days. This operation was proposed as a novelty, but it is in fact only a modification of the old royal suture, in which the skin is respected, and the chances of phlegmonous inflammation consequently lessened. There is a likelihood of obtaining adhesion of the middle portion of the sac by this operation; peritonitis, also, is to be apprehended.

Jameson's Method.—Jameson, a surgeon of Baltimore, performed an operation for the radical cure of femoral hernia, which consisted in cutting a lancet-shaped flap of integument, inverting it, and confining it by stitches in the crural ring, which had previously been exposed by the incisions required to relieve a strangulation. His operation is said to have been successful, but he did not adopt in other instances, or apply it to inguinal hernia. It occurred to Professor Gerdy to attempt this, but in carrying out his idea he modified Jameson's operation in so many respects as to be justly entitled to the credit of inventing a new method.

Gerdy's Method.—Even in fat subjects the finger may be carried, pushing the skin of the scrotum before it, to the external inguinal ring or a little beyond it. M. Gerdy reasoned that if the integuments could be maintained in this position, they would effectually plug up the ring and prevent any protrusion. He devised the following operation. The finger, carrying before it the skin of the scrotum, is forced as far as possible into the inguinal canal. A long curved needle is passed to the extremity of the glove-finger or cul-de-sac thus formed; it is glided over the end of the finger which pushes up the skin, thrust through the integuments, and brought out about the middle of the inguinal canal. The free extremity of the thread carried by this first needle is now inserted into a second needle, which is passed in like manner through the extremity of the cul-de-sac and out through the inguinal canal, only the second needle is made to penetrate at a little distance from the first puncture. By pulling on the two ends of this thread the extremity of the plug formed by the invaginated skin of the scrotum is drawn as far as possible into the inguinal canal. It is fixed in this position by tying the thread around a cylinder of linen or dia-

chylon, as in the quilled suture. The wall of the cul-de-sac is then denuded of its cuticle by the application of caustic ammonia. There are two chances of cure: by adhesion of the cul-de-sac with the inguinal canal and peritonæum, and by adhesion of the walls of the pouch itself, and the consequent formation of a solid plug.

M. Gerdy practised this operation on a number of patients, several of whom I saw. In some, the anticipated results seem to have been attained. There were adhesions externally, but the plug which ought to have obliterated the inguinal ring could not be felt. In these cases, Professor Gerdy did not dare to remove the bandage. I saw other cases which appeared to be entirely cured after the lapse of several months. In some instances, the invaginated skin resumed its former position in consequence of its weight and elasticity; in others, the hernia protruded as soon as a truss was left off. At that time, M. Gerdy complained that he had not cases enough to select those in which his method was applicable. He said he had only large herniæ to operate on. Inflammation ran high after some of his operations, and it was necessary to use cold water by the method of irrigation. One patient died of pleurisy in consequence of this treatment, and since this fatal event the operation has not been practiced.

I do not think it possible to plug the inguinal canal by M. Gerdy's method. The subject on the table has a large inguinal ring, yet if you endeavor to invaginate the skin of the scrotum, you will find it impossible to force it more than a quarter of an inch into the canal. In the patients cured by this method, it was not possible to feel any plug. There was, therefore, another element in the operation sufficient to effect a cure, and this was the suture, carried through the inguinal canal.

Guérin's Method.—It has been proposed to scarify the external wall of the sac after laying it bare. M. Jules Guérin has modified this idea by the application of the subcutaneous method. He introduces a tenotome into the inguinal canal, and attempts to scarify the tendon of the external oblique and also the sac, hoping to provoke adhesive inflammation between the aponeurosis and serous membrane. He also scarifies the external ring. The application here of the subcutaneous method is a happy idea, but the mode of scarifying advised by M. Guérin is not to be commended. Scarifications of the sac are highly dangerous, and the dilatation of the inguinal ring resulting from incisions made in it, removes every chance of cure.

Malgaigne's Method.—I, also, have had my little notion. I thought that by passing M. Bonnet's pins into the sac itself, there would be greater likelihood of producing its obliteration. I passed several pins, and when I supposed sufficient inflammation to be induced, I applied a truss. It was impossible, however, to be certain that the pins were passed at the proper depth, and I have long since given up this operation.

None of the operations that I have described can be depended on for the radical cure of hernia. The method of Bonnet, however, deserves to be retained. In cases of direct inguinal hernia, and where the rings

are greatly dilated, and it is impossible to keep up the hernia with a truss, slight adhesions produced by the compression of the pins will render it possible to use the truss more successfully.

In M. Gerdy's method, too, although the invaginated skin does not plug at all, the idea of passing a suture through the inguinal canal is most excellent, and I am convinced that if surgical science is ever enriched with a more successful operation for the radical cure of hernia, it will be by some modification of this suture.

CHRONICLE OF MEDICAL SCIENCE.

MEDICAL PATHOLOGY AND THERAPEUTICS.

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1. *Acute Hysteria in the Male.* By M. BROKE GALLWEY, Surgeon Royal Artillery.

It is rare to see in our own sex examples of hysteria as well marked as is the subject of the following paper. A disease which is by many supposed to have its origin in the uterine system, and certainly in the majority of instances is accompanied by functional derangement of that system, is here developed in the other sex with a power and intensity very remarkable. We take the case from the British "Army Medical Reports," published in the Medical Times and Gazette.

F. H., aged 22, a gunner and driver in the Royal Artillery, admitted into Hospital at this station, under my care, August 14 of present year, complaining of looseness of bowels, pain in the limbs, malaise, etc. These symptoms subsided, and he was free from complaint for the following three days, at the expiration of which time he experienced severe uneasiness in the stomach and pain in the head (forehead and occiput). Did not entirely lose these sensations, though they were benefitted by treatment; and, at half-past eight p. m., on the third evening after their commencement, he had a "fit," preceded by pricking and shooting in the thighs and knees. I did not see him in the fit, but it was represented to me as consisting in a staring of the countenance and rolling of the eye, but of which he himself retained no recollection. In twenty minutes he was again sensible to surrounding objects; but, on coming to himself, he complained of "great agony" in his belly, head, and breast, as also of uneasiness in the throat; he described the latter as the seat of a "shooting, pinching pain," alternating with "heaviness" in the part. In the course of the same night he had a recurrence of the fits. I saw him in the second, and, indeed, in sev-

eral others. Without other warning than a rolling of the eyes, he passed rapidly into a state of insensibility, accompanied with such violent struggling as to require the assistance of several men; his teeth were clenched strongly, but he did not foam at the mouth. Some of these attacks were longer than others, and were always succeeded by a state of insensibility. Between their recurrence he complained of the same distressing pain in the abdomen and head. He writhed under their severity, and vociferated loudly under pressure of the former. He derived great relief from hot stupes to the abdomen, and the head felt more comfortable under vinegar and water. His general state I treated with opiates and antispasmodics. The pupils throughout were lively and unaffected.

On visiting him again on the morning after, I learned that the fits had continued to return, but with longer intervals, and that he had slept a good deal between them; but, on coming to himself after one of these, the power of utterance had entirely disappeared. His head was unaffected; and, in answer to queries, he was observed to fashion replies with his mouth, but the power of utterance had gone. He now directed attention to his throat; but, instead of complaining of its centre, or of any extended surface, as the subjects of hysteria will do, he carried the point of his finger accurately along the course of the pneumogastric on each side, from its origin, above, in the neck, until its point of submergence into the chest, pushing his finger thereafter, as though he would have followed it in that direction further. A sense of tightness and constriction, or of "pinching," as he described it to me in writing, was the nature of the sensation complained of.

A difficulty in swallowing even liquids was now superadded to his other ailments. Excessive tenderness of abdomen continued to exist, much aggravated upon pressure, with a general uneasiness in the thorax.

In the course of the next twenty-four hours he had frequent returns of the fits, required night and day to be watched, and, when they came on, the assistance of several men was required.

The state of things I have attempted to describe continued for some days, the fits relaxing in severity daily, until the fifth, when he had recovered in all but the ability to speak. In this, no corresponding improvement had occurred. He was to all intents a mute, and I watched his condition with interest.

Three days had transpired since he left his bed. He was allowed to walk about, and divert himself with the other men. He appeared and described himself to me as "well;" "was never better in his life." In the course of the last of these, he suddenly exclaimed, "I can speak?" and did so immediately, as freely and strongly as ever. For above five minutes antecedent to the return of his voice, he experienced a sensation as of "cramp in the throat," accompanied with "difficulty of breathing." Discharged to his duty, August 28.

Sept. 8.—Had been on leave from his barracks during the day; was sober when he came back, at "tattoo," but admitted that he had drank three pints of porter, for which he was not the worst. Was awakened, at ten p. m. on that night, by a sensation of "pinching and shooting in the knees and thighs," from thence extending to abdomen, and gradually, from last-named point, to chest and throat, and finally to head, exactly in the order which I have named. The attack soon amounted to "choking in the throat;" was attended with the same universal implication of the muscular system as before. Insensibility was complete; and, on awaking to consciousness again, his voice had disappeared as before. The duration of the fit was about an hour. On recovering his senses, he declared, and, by his symptoms, evinced, the utmost distress in the belly and chest, as also in the

head, to each and all of which he constantly pointed with his hand as the sources of his sufferings.

The second attack was a close repetition of the first. The fits were as severe, the aphonia as complete; a similar time involved from the rise to the fall of the complaint. The voice was as completely in abeyance as before, and its return introduced by a similar sensation in the throat to that described under recovery at first. But there was a feature peculiar to and distinguishing the second attack, which was not a little characteristic of its essence, and which remarkably pointed to the predominance of nerva in the play of the morbid processes. It was this,—that not a point of his body from the crown of the head to the sole of his foot, but had become a centre of morbid sensibility. Whithersoever the finger was lain, there, as though the galvanic wire had alighted, an involuntary shrinking occurred—a quick, spasmodic, winching of the part, indicative of positive pain from the touch.

The subject of these remarks was well nourished, and of florid complexion. He represents himself as irascible in disposition, and easily excited. He is wont to shed tears and to laugh under insufficient causes; also, when excited, it is not uncommon with him to be inconvenienced by the sensation of a "ball in his throat." During each of the late attacks he passed an inordinate quantity of water; while in health, he eliminates very little.

The history of the foregoing case is full of interest, physiologically and pathologically. Immediately preceding his first attack, he had been suffering from diarrhœa and gastric disturbance, then very prevalent among the Artillery. From the seat of these derangements the irritation seemed to commence and to radiate; and, as far as we are justified in pursuing its invisible track, it appears to me that the terminal branches of the pneumogastric nerve took up and propagated the morbid force, varying it to the origin of that nerve; and that thence, by fresh departures, it occasioned reflex irritation throughout the muscular system at large; in a word, that the irritant was peripheral in its origin, and local, and that the implication of the great centre of intellectual life—the "palace of the mind"—was subordinate in respect of the seat of derangement, and sympathetic in the strict sense of that term;—that the excito-motory system was thence aroused throughout the orgasm by an influence imparted to the brain along a nerve of special functions, and hence the concurrence of the universal muscular system in the morbid irritative action.

2. *Empyema; Paracentesis Thoracis; Hydropneumothorax; Permanent Canula; Daily Iodine Injections for Six Months; Cure.* By Professor ARMAND TROUSSEAU.

The following case, reported to the *Société des Hôpitaux* by M. Trousseau, and published in the *Bulletin de Thérapeutique* (Nov. 15th, 1854), is sufficiently remarkable and instructive to induce us to reproduce it with all its details.

"I have the honour of presenting to the *Hospital Society* a young patient whose history is briefly as follows:—

The 13th of January, 1853, Edme Berlize, æt. 6 years, was attacked by pleurisy and treated by Dr. Fleury. Notwithstanding energetic treatment, the disease progressed, and towards the end of the month Professor Chomel was called in consultation. These gentlemen ascertained the existence of a thoracic effusion, occupying the entire right pleural cavity. There was much fever and oppression. Diuretics, contra-stimulants, and exter-

nal revulsives were employed with still greater energy; but the effusion increased nevertheless, and towards the end of March general anasarca supervened and extreme orthopnœa, and I was summoned in consultation.

M. Fleury and I decided that thoracentesis afforded the only chance of safety, and we immediately practiced this operation, and drew off nearly four pints of creamy inodorous pus. The immediate relief was great, but in a fortnight the right pleura was full again, and by the middle of June the heart and liver were displaced, and the gravity of the symptoms demanded a second operation. The immediate relief was the same; the pus this time had the odour of sulphuretted hydrogen.

By the middle of July the fluid had reaccumulated; but there was resonance beneath the clavicle on the right side; succussion produced the hippocratic gurgling; there was evidently hydropneumothorax. We determined to wait. But on August 15th, the symptoms were so distressing that we made a third puncture, and evacuated nearly four pints of horribly fetid pus mixed with bubbles of gas. This time we left the canula in the wound in order to make injections of iodine. The canula was closed by a metallic stopper.

Every morning the stopper was removed, and the pus allowed to run out, after which an injection composed of an ounce of tincture of iodine, ten drachms of water, and four or six grains of iodide of potassium, was forced through the canula.

During six months the quantity of pus discharged daily varied from three to ten ounces. It was not fetid generally. Sometimes no pus at all came from the canula but gas which created a horrible stench.

At the end of six months, in February, 1854, the injection passed into the bronchial tubes, and was even rejected through the mouth of the child. Chlorinated water was then substituted for the iodine solution, and afterwards aromatic wine was injected.

Notwithstanding, each month the quantity of pus diminished, the chest began to contract, the vertebral column to incline to the right. The appetite and strength returned. We ordered a nutritious diet, wine and bark, and occasionally fish oil.

In July 1854, eleven months after the canula had been left in place, and eighteen from the commencement of the disease, there was scarcely any purulent secretion. In September, there was no discharge, and the introduction of a probe proved that the fistulous cavity had closed. The canula was removed.

The child is now in perfect health. The respiration is heard over all the right lung. The contraction of the chest and curvature of the spine are less and less daily.

Here there was an empyema requiring paracentesis three times, accompanied by perforation of the lung, for which two hundred iodine injections, and almost as many injections of chlorine water and aromatic wine were practiced, and yet a cure was obtained. Look at the patient and judge for yourselves.

I wish to call attention to the extraordinary abundance of the purulent secretion, which may be estimated at six ounces *per diem*, or eighty pounds in all. A full diet was necessary to sustain the patient under this enormous spoliation." C. E.

3. *Plastic Bronchitis.* By J. B. Peacock, M. D., St. Thomas' Hospital.

The variety of bronchial inflammation spoken of by Dr. Peacock, is one which, though rare, is not so unfrequent as to render its study

unworthy of attention. The paper which we make as the basis of these remarks, is published in the Medical Times and Gazette, and reports a very strongly marked case of this modification of mucous inflammation.

Plastic bronchitis, bronchite pseudo membraneuse, or bronchitis crouposa, as it is sometimes called, is an inflammation of the bronchial tubes, characterized by a strong tendency to the formation of fibrinous membrane. The disease oftentimes commencing as an influenza or common catarrh, presently begins to show this peculiar symptom. The expectoration is solid and membranous, spreading out in water like pieces of skin. There are often seen perfect tubes, quite tough and tenacious, of a dull white colour, and evidently *casts* of the bronchial tubes, branching off into arborescent forms; and this trunk with its branches will sometimes be expectorated in lengths of two or three inches. We have ourselves seen two very perfect specimens of this false membrane. One of these specimens was exhibited by Dr. Payne, of Fauquier co., at a meeting of the Medical Society of Virginia some years ago, and attracted a good deal of attention.

The membranous exudation characterizing this disease seems to be almost pure fibrin, and is thrown off in great quantities, occasionally. There are cases reported in which the false membrane extended from the smallest tubes to the trachea. Many interesting cases, collected by Thierfelder of Leipsic, Gendrin, and Cazeaux and others, are alluded to by Dr. Peacock.

Michaelis was inclined to think that these exudations were *decolourized clots*, from blood retained in the tube after hæmoptysis. Blood being poured out from the bronchial membrane, presently coagulates on the tubes, and being deprived of its colour, is eventually expectorated, retaining the forms of the tube upon which it had been cast. It is true, also, that in many of the cases reported, hæmorrhage did precede the expectoration of these solid masses. The opinion of the profession generally, however, is that this membrane is a product of inflammation, analogous to the formation of false membrane in croup, and hence the name, *bronchitis crouposa*.

This affection may occur at any age, but in thirty-four cases collected by Dr. Peacock, it was found to be most frequent between the ages of thirty and fifty.

It sometimes attacks persons in robust health, but more generally is found in phthisical subjects or persons exhausted from some debilitating cause. This fact rather favors the theory of Michaelis.

When occurring in the progress of phthisis, it necessarily follows the course of that disease, and the two combined are sooner or later fatal; but as an idiopathic disease, it yields oftentimes to treatment, though sometimes the tendency to formation of the false membrane remains for a long period.

The treatment consists in relieving the inflammatory symptoms if they exist. The use of expectorants, and especially the constant appeal to emetics, which often succeed in bringing up the exudation in large quantities. Mercury, one would argue, ought to be the remedy to prevent the further formation of this fibrinous material, and Drs.

Gordon and Banks, in the Dublin Quarterly Journal, strongly advocate its use. Thierfelder is disposed to combine moderate depletion with mercurials, and Dr. Watson, in alluding to a case of plastic sputa, accompanied with alarming hæmoptysis, expresses the belief that the treatment was unnecessarily active. In the mere chronic forms of the disease, tonics and cod liver oil will be found useful.

4. *On the Etiology of Glucosuria or Diabetes Mellitus.*

A French journal furnishes us with the following propositions, which are the conclusions of a memoir on diabetes, recently published in the *Gazetta Medica Toscana*, by the celebrated Professor Buffalini, of Florence.

1. Glucosuria may depend, incontestably, on a predisposition existing at birth; the conditions which augment this innate predisposition, and bring it into activity, reside in the predominance of the albuminous state, in the imperfect completion of those organic metamorphoses which are accomplished under the influence of oxygenation. These causes, as well as those habits of life which favour the development of diabetes, can only produce this effect by interfering with the accomplishment of organic assimilations. In this way, epidemic influences may predispose to glucosuria.

2. The use of vegetable, and especially of farinaceous food, is probably a predisposing cause of this disease.

3. Atmospheric humidity combined with a low temperature, by disturbing the functions of the skin, is favourable to the development of glucosuria. If this condition is of long duration, it acts as a predisposing cause; its sudden invasion constitutes an exciting cause of glucosuria.

4. Glucosuria arises from predisposing rather than exciting causes.

5. When once developed, feculent diet aggravates it; animal food moderates and favourably modifies it.

6. An examination of the causes of glucosuria by no means explains its production in the economy, but it indicates that the stomach is the seat of a morbid process from which the formation of glucose results. An analysis of the causes of diabetes is inadequate to demonstrate that the formation of glucose is the only cause of the appearance of sugar in the urine, as it appears to be.

7. Observation seems to determine that there is a positive antagonism between the development of glucosuria and the inflammatory diathesis. C. E.

SURGICAL PATHOLOGY AND OPERATIONS.

1. *Report on Carbuncle.* From St. Bartholemew's Hospital.

The remarkable predisposition to furuncular and carbuncular inflammations has been noticed by the American profession for the past two years, and although we are not aware of anything having been published on the subject which has attracted much attention, yet the fact has been repeatedly recognised by the profession, and it has become quite a habit with us in meeting a medical friend from different parts of the country, to enquire of him if he had seen any whitlows or carbuncles.

The tendency to this peculiar form of inflammation which we have noticed, has been developed in an equal degree in England, and the medical journals of that country have repeatedly called attention to the fact. A few extracts from the Report* on the cases of carbuncle occurring in St. Bartholemew's during the last year will be not without interest to the reader.

The recent increase of carbuncle is plainly shewn by this report. A reference to the book of the institution, gives the number of cases treated by Mr. Paget in the respective years—1842,–3,–4,–5,—None; whilst in the year 1850 we have eight cases; 1851, 4 cases; 1852, 5 cases, and 1853, 9 cases.

The Registrar General's report of the number of deaths from carbuncle in London, furnish additional testimony. We find in 1841, 1 death—1842, 5—1845, 9—1846, 3; whilst in 1852 there are registered 50 deaths; 1853, 70, and 1854 (up to November) 81 deaths from this disease. An accurate table of thirty-five cases of carbuncle made out by the reporter from the books of the hospital, furnish the following data.

The disease is found at all ages and under all circumstances, and it is quite impossible to discover any hygienic cause; the robust and healthy are found together with the intemperate and cachectic; whilst some of the worst cases reported, have been brought from the healthiest parts of the country.

Males are more liable to the disease than females. Of the 35 cases, 29 were men and 6 women, the Registrar's report also corroborates this point. Of 49 deaths, the particulars of which are mentioned, 32 were men, 17 women. The same holds good with regard to furuncles. A calculation made from several hundred out patients of St. Bartholomew's gives the proportion as more than two to one.

Diet has but little influence on these cases; for in 33 cases, 12 were well fed, 10 moderately fed, 10 badly fed and 1 half starved.

* Med. Times and Gazette, December No.

Part Effected. No part of the body seems to be exempt from carbuncle. It is extremely rare on the scalp, and but one case has ever been reported where it appeared on the feet, (that case occurred to Mr. Coulson.) The favorite seats of carbuncle are those where the skin is the thickest. In the 25 cases reported, 12 appeared on the nape; 10 on the back and 2 on the buttock.

Treatment. The general treatment was dependent very much on the symptoms and general condition of each case. High inflammatory fever being generally present in the beginning, was met with salines and low diet: opium was freely administered to control the pain, and induce sleep, whilst quinine and ammonia would often be exhibited in the second stage with great effect. - The local treatment at St. Bartholomew's was invariably to make free incisions into the carbuncle. An exception however was made in 8 cases of the 35 reported, which upon admission were doing well and free openings had been spontaneously formed. (These 8 cases go to prove that the incision is not always necessary.) The relief to pain however which follows the incision is conclusive as to its propriety, even though the slough is larger than if it had been avoided. The fact that in 27 cases here reported, the progress of the disease was checked in 17 cases by the first incision, is satisfactory on this point.

The necessity of uniting the application of caustics with the incision was not often recognised, though when the disease seems to spread itself with rapidity, they may be looked upon as indicated. Messrs. Startin and McWhinney at the hospital for Skin Diseases, prefer the nitrate acid of mercury; Mr. Ure at St. Mary's uses the potassa fusa for the same purpose.

2. *On the Treatment of Gleet.* By M. Ricord.

[M. Calvo, a private pupil of M. Ricord, has recently published in the *Moniteur des Hopitaux* reports of the lectures at the *Hôpital du Midi* during 1854. Here are some useful points in regard to the management of blennorrhœa, which we take from the number for September 12th of the journal alluded to. On a future occasion we may make further extracts.]

Notwithstanding the most judicious treatment, blennorhagia often passes into the chronic stage, and becomes the intractable disorder termed blennorrhœa, *goutte militaire*, or gleet.

When this occurs, it is proper in the first place to examine the meatus of the urethra; the lips of this orifice should be separated, and if any inflamed follicles are perceived, they should be incised with a cataract needle and cauterized with nitrate of silver.

If the discharge continues, it will be necessary to institute an internal treatment. The patient may take from three to six spoonfuls of a solution of one drachm of citrate of iron in a pint of syrup of Tolu, and drink freely of tar water, or of a decoction of uva ursi; I also frequently prescribe turpentine and Canada balsam in the dose of six-grain pills morning and evening.

The remarkable success obtained by means of the preparations of iodine, the iodide of iron particularly, in the treatment of chronic purulent discharges, induced me to employ these preparations in the treatment of gleet. The results have entirely satisfied me, and I regard the pills of the iodide of iron, preserved by the method of Gille, as the most efficacious medicament we can oppose to those chronic discharges, which are so rebellious as to cause the most experienced practitioners to despair of their cure. Four to eight pills may be taken daily; each pill contains one grain of the iodide.

Blisters to the perinæum or the inner surface of the thighs sometimes have a good revulsive effect, and occasionally cuts short the disease; sea-bathing has the same effect.

The following injections are suitable in this period of the disease; *Rose water* six ounces; *sulphate of zinc* and *acetate of lead*, each, half a drachm; or twenty or thirty grains of *tannic acid* may be substituted for the acetate of lead in the above formula. Or the patient may use an astringent injection composed of equal parts of water and Roussillon wine, with the addition of a little sugar. Here are two other prescriptions which are sometimes useful: *vinous infusion of red roses*, six ounces; *tannic acid*, one or two scruples; Mix.—*Distilled Water*, six ounces; *iron filings*, one scruple; *protoiodide of iron*, four to six grains. Mix, and take care not to shake the phial.

There are some obstinate gleets, uncomplicated with stricture, which can only be cured by the introduction of bougies. These instruments cause a mechanical irritation, an artificial gonorrhœa, which may be cured by cubebs and injections. The pewter bougies of Beniquè answer admirably for this purpose; they should be introduced gently, and left in place two or three minutes.

There is another plan which may be used as a last resource; it consists in cauterizing the whole canal of the urethra with Lallemand's caustic-holder. The instrument is introduced until its extremity reaches the neck of the bladder, the canula is then drawn back and the cup of caustic is exposed and rapidly rotated as the instrument is withdrawn. There is considerable pain and scalding during micturition after the operation, but these symptoms rarely last long, and two or three cauterizations commonly put a stop to the gleet. But there are some cases which resist all the means I have described; in such, it is the surgeon's duty to recommend a tonic regimen, moderate sexual indulgence, residence in the country, mental diversion, and above all the patient should be exhorted not to think about his complaint, which is too often a cause of hypochondria and even of suicide in weak minded individuals. O.

3. *On Subcutaneous Osteotomy as Performed by Langenbeck.* By Dr. P. Frank.

We have read with interest two papers published in the Medical Times and Gazette by Dr. Frank, on the subcutaneous division of bones

for the purpose of remedying osteous deformities. The whole subject is one of great interest, as the frequency of these deformities, whether arising from constitutional causes or bad surgery, is undisputed.

This method of overcoming the deformities of bones is the suggestion of Langenbeck of Berlin, and many of his school, Wagner of Dantzig amongst the number, have adopted his operation and successfully practiced it. The report of one case will, at the same time, explain the object of the operation and its mode of performance.

Ann Bolles, aged 9. Right tibia is curved outwards, owing to defective nutrition in early childhood, and the foot following the curve presents the appearance of varus. The body rests on the malleolus, the sole of the foot not touching the ground. The object being to straighten the tibia, Professor Langenbeck proceeds to make an incision of a half inch opposite the greatest curvature and down to the bone. With a fluted chisel drill, two lines in breadth, attached to a centre bit, he perforates the bone at the upper and lower angle of the incision. A narrow saw is now introduced into the upper perforation, and the bone is sawed through its centre until the lower perforation is reached. The condition of things now is, that the bone is only held together by two osseous bridges on each side of the track of the saw from the upper to the lower perforation. The limb is now left quiet, the small incision carefully closed and dressed, and the inflammation which follows permitted to subside. Some suppuration will occur as the bits of bone left by the saw and drill have to be thrown off. When healthy granulations begin to show themselves in the wound, Langenbeck proceeds to finish the operation by *fracturing* the bone at the point which has been weakened by the passage of the saw. This requires but little force, and the limb is then set properly. Very little inflammation is said to follow this last step, and the deformity of the bone is permanently overcome.

OBSTETRICS, &c.

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1. *Case of Superfœtation.* By M. THIELMAN.

The remarkable circumstances here recorded are declared to be correct by their reporter, and, if so, certainly go to enlighten us somewhat as to the cause of double birth. The case is found in the Med. Chir. Review for October 1854.

A peasant girl, aged 25, had been the mother of two children. In July 1852 she became pregnant for the third time. *She menstruated twice after conception.* On the 26th of March 1853 she was taken in labour, and the next morning gave birth to a small but living girl child. The lochia ceased in a few hours, and the secretion of milk was so scanty, that the child had to be fed. The woman, however, in eight days returned to her duties, but soon felt, in her left side, the movements of another child, and on the 18th May, *fifty-two days* after

the birth of the first child, a second girl was born. The secretion of milk now came on fully, and easily supplied both children.

Are we to suppose that the second impregnation followed after the second menstrual period? That the impregnation may occur at different periods, is proven by Dr. Attaway's case of twins of different colour.*

2. *On the Rising and Falling of the Pulse during Labor Pains.* By Professor MARTIN, of Jena.

The observations of Hohl, that with every uterine contraction the uterine rush becomes more frequent, louder and accompanied with a peculiar shrieking singing tone, which increased frequency, gradually subsided to what it was before the pain, led Professor Martin to make his observations on the condition of the pulse during the progress of labor. The observations of Herr Mauer on the same phenomena, which were made in the professor's clinique, will be included in this abstract, as the results are confirmatory of each other.

Dividing labour into five stages, the influence of the pains on the pulse during each stage are noted. In the first stage, the pulse increases in frequency not more than two or three beats in every five seconds. In the second period, the frequency rises higher, often from seven to ten beats in five seconds, and gradually falling back to the original standard as the pain passes off. This increase of frequency becomes more marked up to the termination of the labor, whilst in the fifth or placental stage the rising is small. The screams and groans of the woman do not seem to have any effect upon the regular rise and fall of the pulse.

What is the cause of this phenomenon? Is it muscular action, accelerated respiration, direct stimulation through the blood, or irritation in the nerve-centres which influence the heart's action? After reviewing the three first conditions, Professor Martin and Herr Mauer agree in considering that the nervous centre of uterine action is the sympathetic, and that the heart's action is influenced by the uterine contraction through the sympathetic nervous system.

This regular rising and falling of the pulse enables us to judge of the onset, duration and strength of labor pains, and also is a new and desirable symptom in the discovery of failing labor pains.

The reporter in the British and Foreign Med. Chir. Review (from which we make our abstract) suggests another explanation of this fact.

In the interval between the pains, a large portion of the maternal blood is circulating in the uterus and placenta, hence the fact that in the interval the *fœtal pulse* rises to its highest point, but on the return of pain, the muscular compression stops this free circulation; the increased volume of blood thrown back upon the heart acts as a stimulus, and hence the increased frequency of the pulso of the mother, and the diminished frequency in the fœtus.

* See Virginia Medical and Surgical Journal. Vol. III., No. iv, p. 351.

3. *Zwancke's Pessary.*

To the long list of new pessaries which we have brought to the notice of our readers, we propose to add one more. The womb doctors certainly deserve the credit of ingenuity in their ceaseless labours on this instrument, for America, Great Britain and the continent vie with each other in the invention and modification of new pessaries.

The pessary of Zwancke, which is very highly spoken of by Professor Chiari, (*Zeitsch. der K. K. Gesel der Aerte zu Wien*) is simple and easy of explanation. It consists of two spoon-shaped blades, which are prolonged below into simple stems, united with a hinge, so that by means of a screw the two blades may be made to diverge. The instrument is introduced, the blades being in apposition, then being separated they expand the upper part of the vagina and thus support the womb. Chiari says, it is easily worn, gives no pain, and is very efficacious. He speaks of many successful results from its use.

TOXICOLOGY.

1. *Poisoning with Arsenic: Exhumation of the Bodies Sixteen Years after Death.*

In 1832, Marchal, a forester of Augomont, had criminal relations with a girl of the village of the name of Aubert, but refused to marry her. She was soon married, however, to a man of the name of Vincent, and subsequently Marchal himself entered into the state of wedlock with a Mlle. Tournier. Shortly thereafter, the two former lovers renewed their *liaison*. Family squabbles arose; and Marchal, determining at all hazards to be united to his mistress, poisoned her husband, along with his own wife. Marchal was re-married in the course of ten months; but from the influence of his character among the people, no suspicions seem to have been excited. Towards 1840, he contracted an intimacy with a neighbour's wife of the name of Stocker, which became very notorious. Emboldened by his previous success, he at once poisoned his own wife, his former accomplice; in her mortal agony, the poor woman predicted that the husband of Stocker, by the name Geoffroi, would be the next victim, and that Stocker would be received as Marchal's wife. And so it happened; in a few months Geoffroi died with all all the symptoms of poisoning, and ten months thereafter Marchal and Stocker contracted a new marriage. This time, however, rumours got abroad; and it coming to the ears of the authorities that Marchal, under the pretext of poisoning crickets, had pur-

chased arsenic on different occasions, he was ordered to be arrested, which was effected as he was making an attempt to cross the frontier.

The bodies of Aubert and Geoffroi, which had been buried for fourteen or fifteen months, were first examined. They were easily recognised, though in an advanced stage of decomposition. Arsenic was found in notable quantity in their digestive tubes. Thereupon the bodies of Vincent and Tournier, buried nearly for sixteen years, were ordered to be exhumed, for the purpose of determining whether their deaths had not been also caused by poisoning. Tournier, Marchal's first wife, had been interred in the same grave as his second, and the grave being still open, on digging a little deeper, fatty débris were discovered, as also several pieces of bone, and some blond hair—all which were preserved to assist in identifying the remains. Fortunately, the cemetery had only been opened within the previous twenty years, so little difficulty was experienced in determining the exact position of the corpses. Of that of the man Vincent, nothing remained but an entire skeleton, devoid of any covering of animal matter, and surrounded by a large quantity of water. Not the slightest trace of soil impregnated with animal matters could be discovered, and the boards of the coffin had almost completely disappeared. The cranium, however, was found to contain the brain entire, but shrivelled up and reduced to the size of the fist. It was submitted to a careful analysis, and a decided ring of arsenic was obtained by the usual process. The débris of the woman Tournier gave similar results; and to remove all doubts, the earth of the cemetery was ascertained to contain not the slightest trace of arsenic. Marchal was condemned to death, and Stocker to imprisonment for life. (*Journal de Chimie Médicale.*)—*Assoc. Med. Journal.*

2. *The Poisonous Qualities of the Common Butter Cup.*

We find, in the Journal de Chimié Médicale, a case of poisoning with the "Ranunculus Acris" or butter cup.

Some children amusing themselves by making crowns of the "boutons d'or," says the Journal, one of them was tempted to eat some of the flowers. Violent pain simulating colic and all the symptoms of poisoning supervened, but fortunately the life of the child was saved.

3. *Poisoning by one Drachm of the Syrup of Poppies.*

At a recent meeting of the Medical Society of London, Dr. Burke Ryan reported the case of a child, aged fifteen months, who was given a teaspoonful of the syrup of poppies during the night. Before morning the child's breathing became stertorous, its face cold, and it died before six o'clock in the morning.

This case serves as a warning to parents, how they venture to meddle with narcotics without proper medical advice. The profession should also learn a proper caution in the administration of these remedies, whose precise strength is not to be relied on. The officinal

syrup should not contain more than one eighth of a grain of opium to a drachm, but it is often prepared from the tincture of opium, and we believe that in America it is frequently nothing but a *syrup of morphia*, and hence we must conclude that the physician is much safer when he prepares this potent remedy by a formula of his own, so that he may be perfectly accurate as to the quantity given, and calculate better on its effects.

EPIDEMIOLOGY AND HYGIENICS.

1. *The Life and Diseases of Nations.*

An original theory on the laws which govern epidemics is found in a memoir read by Dr. Charles Reclam of Leipzig before the general meeting of German Naturalists and Physicians, at Göttingen, in September 1854.

The author reviews the theories generally received as to the cause of epidemics, and considers them as being unable to explain the phenomena which are supposed to be their result. He declares that the assertion of Hippocrates is true, that "a general disease must arise from a general cause," and hence, atmospheric influences, the phenomena of nature, (especially earthquakes and inundations), sidereal influences, and invisible flocks of animalcules floating in the air, have all been considered as the origin of epidemic diseases.

"There is something else," says Dr. Reclam, "which appertains to us all in common, and which none of us can avoid or escape from,—*The National Life.*" On this subject we give a translation of the author's memoir.

As every one is ethically an offspring of his times, and moves on involuntarily in the ethic (spiritual) stream of the general intuitions of life, he must in the same way, howsoever high or low he be, receive also the somatic influence of his time, the influence of its customs and manners, its mode of feeding and dressing. If this be true, the mode of life of the people (nations) will appear to be in closer connection with epidemic and popular diseases than is the air; just the same as any sensible medical man of this time will compare the mode of life of a patient with his sporadic or individual malady. Dr. Hecker already has given some hints in his valuable work; but he reckons amongst "external agents" especially the cheapness or dearness of food. Starting from the conviction that other influences are not less powerful, I have followed up, in the first instance, the mutual relation between the diseases and the mode of life of the population of Leipzig; as in this instance, the best sources for comparing the sanitary condition and mortality on the one, and the mode of life in its widest acceptation on the other hand, were at my command. Thus I succeeded in fin-

ding out, from the year 807 downwards, forty-six periods of epidemic diseases, each of which was either preceded by moral or political contention, or material disturbances, or by revolutions in the manners of public life. These, then, are the most influential agencies acting upon the formation of the mode of life of the masses. I shall cite a few examples:—

1. *The Reformation* was effected at Leipzig, as well by blood as with ink. The new doctrine was fought for and against with arms, as well as with learned disputations. Executions, and the refusal of honourable burial, increased exasperation, even to the estrangement of oldest friends and the members of the same family. But, just subsequent to the worst outbreak of fanaticism, the plague of 1535 and 1538 made its appearance.

2. *During the Thirty Years' War*, Leipzig was devastated several times, which brought on an epidemic of plague, in which, from 1630-1633, the *third part* of its population died. Previously, also, Tilly had devastated the country three miles around, because his demand of eighty thousand pounds of bread daily could not be satisfied.

3. The Swedes, however, who had driven him away, behaved now even worse than Tilly's hordes. Contemporaneous chronicles speak of extortions and tortures which sound like fables now-a-days. The so-called Swedish draught was discovered: persons were roasted alive in baker's ovens; suspended by the feet, and a fire lighted underneath; sawed asunder through the pan of the knee; and children were nailed to the doors, as marks for pistol shooting, for extorting from parents their last groat. The terror inflicted by the Swedes in Leipzig has remained there ever since as a popular tradition; and when, a hundred years afterwards (1706), they returned merely on their passage, people trembled at their very aspect. In the first instance, the poor peasants fled before their atrocious behaviour into the fortified city, where many of them lived in half ruined vaults of churches and grave-yards. The consequence of all that was the repetition of four years' epidemy (1636-1639), in which nearly half of the inhabitants died.

What has been stated here in regard of a single city, appears also in the epidemics which spread over the whole of Germany. For the sake of speaking of our present age, we say—

1. The campaigns of 1813 were followed by the war typhous.
2. The popular commotions of 1830 were followed by the cholera in the next year.
3. The years of 1848 and 1849 were followed by the cholera.
4. The same disease appears now concomitant upon the war North and South.

Where such a phenomenal regularity is observed, it would be foolish to speak of chance and accident; the fact stands undisturbed, if the explanation should be wanting. It is interesting, however, to observe, that the epidemics transgress the limits of the seat of war or revolution, and that thus even the passive ones become its prey.

One of the greatest epochs of European epidemics took its origin in the discovery of America, which more than any other event, had effected an immense revolution in every branch of national existence. The sudden change in the value of the precious metals caused a forcible revulsion in all commercial relations, one quite different from organic and natural development; and gave to hitherto languid industry a forcible impulse. The new knowledge and experience which mankind acquired influenced mightily every branch of science, especially all branches of natural science. At the same time appeared already that religious excitement which found its acme in the Reformation. Conjointedly, a number of quite new and hitherto unknown luxuries, as coffee, tea, tobacco, various tropical spices, were introduced, whose use increased in an astonishing ratio. The effects of this ethic

and social revolution of ancient Europe are recognisable in the appearance of the English sweat, the petechial epidemic, and the bubo plague, which in succession spread over Europe.*

In conclusion, we shall yet speak of an influence which the discovery of America, Java, and the Molluccas, has had on the general sanitary condition of man. Whilst formerly the chief food consisted mainly of fat meat, farinaceous porridge, and pastry, these supporters of the process of combustion have been yet multiplied by the blood-exciting alkaloids. While in the middle ages, as is seen from their cookery books, dames regaled each other with some water gruel, seasoned with a little rue or sage, or with some porridge of millet or rice sweetened with honey—substances quite devoid of any exciting ingredient; now-a-days tea and coffee are taken on this and every similar occasion. That the morbid constitution of man changes in the succession of time, and the changes of mode of life, may be proved by another fact, viz., by the terminology of symptoms. Where a great number of subdivisions or subspecies of one symptom are to be met with, the symptom itself must have been copious, affording thus a copious opportunity and occasion for such observation. This, for instance, is the case with the symptom of somnolency. No physician, however skilful, could make out, now-a-days the many varieties of sopor, coma, etc.; and, as we find these symptoms so minutely specified, we must assume that they were more copious then, and that consequently the morbid constitution of mankind has been since modified.

I abstain yet from any enunciation of a theory or explanation, and have stated but a fact. It suffices that a new law of nature has been found. This phenomenal law is irrevocable, and is to that effect: "Every more important change, every undue moral (mental) excitement, every material or moral stinting (*Verkümmerung*) of the national life and its development, is followed by a national disease."

No one can isolate himself from that influence; every one forms (even though unconsciously) a part of the great system of the world's organism.

2. *On the Contagion of Cholera.* By Professor Justus Von Liebig.

In a letter to a friend in England, Professor Liebig gives a resumé of the investigations of Thiersch and Pettenkoffer during the late severe epidemic in Munich. All suggestions which may tend to throw light on this terrible disease, its mode of diffusion, or laws which govern its progress, are certainly worthy of the most attentive consideration.

Dr. Pettenkoffer who was commissioned by the Bavarian government to make these enquiries arrived at the following results.

1. A bason-like conformation of the ground (*Muldenartiges Terrain*) generally favours the occurrence and fatal issue of cholera. Those houses especially which occupy the lowest site in towns, and in which the privies and cesspools are so constructed that the liquids they contain do not pass from the house, but enter it, are the most liable to the disease.

* Dr. Reclam here commits an anachronism, in referring "the appearance of the English sweat, the petechial epidemic, and the bubo plague," to the changes produced by the discovery of America and the Reformation. These diseases, we learn from Hecker, appeared some years before the above mentioned events: viz., the sweating sickness in 1485, soon after the battle of Bosworth; and the bubo plague in Italy in 1477.—*Editor Assoc. Med. Journal.*

2. A loose soil under the houses, capable of absorbing the liquids, augments the tendency of a district to the miasm, of which a substratum of rocky stones renders it much less susceptible.
3. A certain degree of moisture of the soil also increases the susceptibility.
4. The products of decomposition of human and animal excrements contained in the soil, appear to be the elements that determine the soil's capability for absorbing the miasm.
5. In towns, the inhabited declivities or hollows, the soil of which presents this absortive character, are always more liable to cholera than the more elevated sites in their neighborhood, independent of their absolute elevation above the level of the water or the sea.
6. The same conditions prevail in privies and sinks, especially when provided with wooden pipes and pans, as in soil impregnated with putrefying excrements.
7. In towns, those districts which have no privies, but only night-stools, are more obnoxious to cholera; and here, again, those houses especially which have common cesspools in the yard, provided only with a slight fall, or with a fall inclining towards the houses.
8. The excrements of cholera patients, when in a state of decomposition, become fertile sources for the propagation of the disease in families.

The observations of Dr. Thiersch have remarkably confirmed the facts elicited by Dr. Pettenkoffer. Dr. Thiersch found that cholera patients, the corpses of persons recently dead of cholera, and the matters evacuated by vomiting and diarrhœa, do not propagate the disease; they are not contagious. If the matters evacuated by stool are left to themselves, at a temperature of from 5° to 10° centigrade, (41° to 50° Fahr.,) from three to seven days a change takes place; they undergo a process of fermentation; they are then capable of exciting cholera in healthy individuals. The period within which cholera evacuations can produce this effect, does not last longer than eight days. If recent cholera evacuations are mixed with the food of mice, in small quantities, no effect is produced in the animal. After being left to themselves for from three to seven days, the evacuations pass into a state of fermentation, which may be recognized by their converting amygdalin into the well-known products of its decomposition, a property not possessed by the fresh evacuations. If the matter in this condition be added to the food, the animals which have eaten of it sicken in from four to seven days, and die within thirty-six or forty-eight hours of their being seized. The disease commences with diarrhœa, and the dead body shows all the phenomena observed in human corpses that have died of cholera.

The facts ascertained by Dr. Pettenkoffer and the investigations of Dr. Thiersch, mutually explain, and are supplementary to, each other. The poison of cholera is developed in the excremental liquids after they have left the body. It is thus that privies, sewers, and all places in which they become mixed with animal matters, become real sources of cholera poison.

The well-known preventives of fermentation and putrefaction remove

the cause of the propagation of cholera. Chloride of lime, sulphuric acid, tar water, etc., at once present themselves to the Physician as disinfectants. It is the duty of the Medical man, in promoting the interests of science and humanity, to employ these remedies, and to determine the extent of their power.

In the prison of Kaisheim (in Bavaria), the cholera was introduced by an individual who died there; and the early employment of disinfectants was the cause of the disease being limited to this case, and of but one of the other 500 or 600 prisoners, although in a dangerous locality, having been attacked. On the other hand, in Ebrach (in Bavaria), when, from ignorance, this precaution was not at once adopted, 15 per cent. of the 350 prisoners died.

The discoveries of Dr. Thiersch throw much light upon the nature of contagious poisons. The blood-producing substances, in the condition of their normal metamorphoses, are essential to nutrition and health. The same substances and their products, in a state of abnormal decomposition, give rise in the healthy organism to disease and death.

THERAPEUTICAL RECORD.

Aneurisms and Varices.—The method of producing coagulation of the blood in aneurisms and varices, by galvanic puncture, is examined very carefully by Dr. Werner Steinlein of St. Gaul, who recommends the operation as follows. The coagulation occurring more actively at the *positive pole* of the battery, a certain number of zinc needles should be introduced into the aneurism and connected with the positive pole. The negative pole should be supplied with a plate of platinum resting on the skin near the tumours, after having augmented the conductibility of the epidermis by moistening it with an acidulated solution.—*Zeits. der Gesell der Aerte zu Wien.*

Cancer.—Dr. Gillespie, before the Medico-Chirurgical Society of Edinburgh, recommends in the highest terms the employment of chloride of zinc as a caustic, and reports a case of cancroid ulcer of the calcaneum treated with success by its use. The chloride of zinc is becoming a favorite with the American profession. It is always thorough, and easily kept under command.

Cholera—New Remedy!—Dr. Ottingen of Munich, who has been lately elected "Councillor Royal" on account of the services rendered by him during the late epidemic in Bavaria, considers that cholera is "a morbid affection of the sympathetic nerve," which terminates in paresis or paralysis of the vaso-motor nerves. In consequence of a

morbidly increased exosmotic process, the serum of the blood exudes into the intestinal canal, occasioning desquamation of the intestinal epithelium. The following remedy he proposes as a stimulant to the vaso motor nervous system. ℞. *Valerianate ammonia* ℈*j; aq. dist.* ℥*iij; syr. simpl.* ℥*ss.* A table spoonful to be administered every quarter or half hour. He uses frictions with *ice* or Burgundy vinegar, followed by constant rubbing with hot flannels, drinks of ice water or claret, and ice pills.

Cholera—The Piratical Specific!—"A new and infallible mode of treatment for the Asiatic Cholera" is published in London by Dr. F. Wilson of Mauritius, (which agrees very well with the fact that one tenth of the population of that island died with the late epidemic.)

The Piratical specific is cajeput oil. Dr. Wilson was captured by some Malay pirates in the Moluccas, who communicated to him this wondrous remedy. In addition to the cajeput oil energetically administered, he uses frictions to the body and limbs.

Epilepsy.—In a communication to the Medical Times and Gazette, Dr. Sieveking details seven cases of epilepsy treated with the cotyledon umbilicus, and concludes that this medicine seems to possess the power of mitigating this dreadful disease if it is not able to produce a perfect cure. He uses the liq. cotyl. umbil. in drachm doses three times a day, but contends that it is impossible to account for the modus operandi, as its effects on the system are hardly recognizable, though he classes it with digitalis, producing a slightly diuretic and sedative effect.

Gangrene of the Lung.—Dr. Bowditch of the Massachusetts General Hospital reports a case of gangrene of the lung cured under his treatment. The patient came in on November 22d and was discharged December 29th. She had all the symtoms of this usually fatal disease, and was treated with the *liquor soda chlorin.*, in ten drop doses, repeated frequently, and anodyne inhalations; a generous diet being superadded.

Hare-lip.—The "earliest operation for hare-lip is reported by Mr. Douglas in the London Lancet. He attended the mother in her labor. The child having single hare-lip he operated on it *two hours after birth*, using fine sewing needles instead of pins. The hemorrhage was trifling. The child was kept from the breast three days; on the fourth, the needles were removed, union by the first intention having ensued. He reasons thus on the propriety of the early operation.—"That infants bear much injury during birth without fatal results, and they can be made to fast three days after birth, the secretion of milk not occurring usually for that time."

Hemorrhoidal Hemorrhage.—M. Trousseau reports in the Gazette de Hôpitaux the favorable results derived from the use of injections of the sulphate of copper in hemorrhages from the rectum, the conse-

quence of piles. After using injections of nitrate of silver without avail, and the vegetable astringents having been unsuccessful, M. Trousseau recommended an injection of the Sulph. Cupri to be used daily.—The hemorrhage was relieved in eight days.

Hooping Cough.—Thirty-three cases of hooping cough, treated by the application of the nitrate of silver to the larynx and pharynx, are recorded by Dr. Eben Watson of Glasgow. Dr. Watson obtained the following results—cured in a fortnight, 10; in three weeks, 16; in four weeks, 5; resisted the treatment, 1; died, 1.

Irritable Stomach in Phthisis.—Dr. Peacocks' remedy for this complication which often prevents the administration of cod liver oil, is a mixture of hydrocyanic acid 3 minims, and 10 grains of the tris nitrate of bismuth in a draught with mint water, to be taken thrice daily. The prescription has often been found efficacious.

Neuralgia.—An ointment of two grains of aconitine to the ounce of lard, has been employed by Mr. Hilton of Guy's Hospital, to alleviate the pain of this affection. One of those distressing cases of neuralgia following after amputation, was much benefitted by this ointment. Its great power should be always remembered in advising its use, and the patient cautioned as to the danger of venturing beyond his directions.

Podagra.—This disease, though not so frequent amongst us as with our porter drinking brothers of old England, is still not so rare as to be passed by unnoticed. Dr. Pritchard of the Royal Navy, has used the Piper Methysticum in obstinate cases of podagra with marked success. The remedy has been but lately introduced to the profession and deserves some attention.

BIBLIOGRAPHICAL RECORD.

1. *Essay on a New Method of Treating Ununited Fractures and Certain Deformities of the Osseous System.* By DAVID BRAINERD, M. D., Professor of Surgery, Rush Medical College, &c., &c.

The treatise which we propose to make the subject of this notice, is a part of the Transactions of the American Medical Association for the year 1854, and deserves the special attention of the profession, not only because it was the fortunate recipient of the prize offered by that body, but for the great surgical importance of the subject on which it treats, and for the orig-

inality of the experiments instituted, and the interesting result derived from these experiments.

We do not desire to discuss the question whether this paper of Dr. Brainerd's, having been already presented to a foreign society, came within the design of the Association in offering a yearly prize for original contributions. We certainly think that it would have been more respectful to the Association to have given it priority, but we see no reason why an original suggestion of importance should not be submitted to any number of societies for their approbation or rejection. Although such a procedure would argue much confidence on the part of the author as to the merit of his work, yet if, as in the present instance, it does possess merit enough to meet with a favorable reception both before this society and the French Academy of Surgery, and if the views presented, were considered original in both countries, we can see no real cause of complaint. If a man is never to offer an essay, any part of which has ever been published, then the only candidates hereafter before the Association, will be those who are lucky enough to strike out at one blow, a valuable theory or brilliant discovery, whilst the one, who has year by year, gradually added observation to observation, and fact to fact, until he has achieved a great result, is to be excluded from the contest, because parts of his theory or many of his experiments have been previously brought before the public.

Another point which we shall here but casually notice is, that we understand that Dr. Detmold of New York claims to have performed the operation claimed by Dr. Brainerd as original with himself some years ago; the same principle being involved and the same object sought. Not being possessed of the requisite information to ascertain who can claim priority on this point, we can only with propriety state here, that to Dr. Brainerd is undoubtedly due the credit of bringing the subject authoritatively before the profession, and he certainly stands now as the originator and author of the method.

As our space is always limited, we will be compelled to offer a very succinct account of the suggestions and experiments of Dr. Brainerd. To follow him closely would be not only impossible but impolitic, for the doctor's brain is so full of ideas, that he can not give utterance to one with any clearness or explicitness. His meaning is often confused and cloudy, and seeming to be conscious of this defect, he attempts to compensate for it by a very methodical subdivision of his treatise, and he opens with part 1, chapter 1, section 1, division 1, and every page so garnished with 1, 2, 3's and a, b, and c's, as to make one feel very uneasy lest he lose the thread of his discourse in the attempt to master the subject. The merit of this production is in the *idea*, which supported as it is by conclusive experiment, and successful practice, may now be considered as demonstrated. Let us look at it more closely.

A bone broken, from some cause remains ununited; the idea is to cause this bone to unite by perforating its broken ends in various directions with a sharp and awl-shaped instrument. If this simple operation *will* accomplish this object, its superiority is manifest over any other method which is now practiced; the injury to the soft parts amount to nothing, (so small is the perforation that it is at once closed with collodion,) the pain is equally trifling, whilst the performance of the operation is so simple as to be within the power of the merest tyro to execute. A small sharp pointed shoemaker's awl, set in a handle, and of the highest temper, is pushed through the soft parts opposite the seat of fracture, and the awl being directed upwards and downwards, is thus made to perforate the broken ends in every direction. Points of ossification spring up along the track of the perforator with great rapidity, and the fracture is united by the pegs of bone which the introduction of the perforator caused to form along its track.

A series of experiments are made to prove that such results follow this operation. The old idea that the introduction of setons between the ends of a broken bone favored union, is completely exploded if these experiments are to be relied on, for they prove that any foreign body, whether metallic or non-metallic, if permitted to remain in contact with bone will produce *absorption* and not *formation* of ossific matter. Various specimens taken from the French military hospitals are presented, showing the effect of a bullet resting on, or imbedded in bone, forming a cavity around it, by promoting bony absorption. The introduction of setons are proved to produce the same result, the opening made by the seton becomes larger and larger, and therefore we must suppose that the great Physic's patients recovered *in spite* of his operation, and not as the result of it.

When however the foreign body is introduced between, or through the ununited bone, the effect is to develop with great rapidity, the *formation* of ossific matter, the process at once begining along the track of the instrument, and what was a perforation becomes a *peg of new bone.* Brainerd's experiments prove that a simple perforation of a bone is filled up much more quickly than the union of a simple fracture can take place, and hence we may conclude that this operation might hasten the cure even in such cases.

Having become satisfied from repeated experiments on animals, that the results so hastily sketched by us were reliable, Dr. Brainerd performed the operation successfully on man, and the reader is referred to his report of cases, occurring in his own practice and in the hands of others who adopted his theory. Suffice it, to say, that the idea first proved true by experiments, is found to be successful in practice. Nothing now remains but that it should be submitted to the searching test of general practice, where we earnestly hope it may fulfil the anticipations of its author.

We can barely say one word upon the second suggestion of Dr. Brainerd,

that *osseous deformities* may be cured by introducing the perforator repeatedly at the point of curvature, and thus by depriving it of its substance, enable the surgeon to fracture with ease and overcome the deformity. A bone, for instance, which has been badly set, thus producing deformity, may be so *weakened* by the introduction of the perforator, as to permit a refracture and restoration of the limb to its proper shape.

This proposal is *not* new with Brainerd. Our chronicle contains a method of operation proposed by Langenbeck of Berlin, which contains the same idea. We refer our readers to that article, but we will say that Brainerd's method is to be preferred inasmuch as his perforator does less violence to the soft parts than the sawing process of Langenbeck, and of course approximates nearer to the condition of a simple fracture. It is easier to perform, and less liable to produce dangerous consequences.

His experiments also would seem to prove that the inflammation produced by the perforator, tends to a general softening of the surrounding part; making them admit of bending, or interstitial fracture, upon the application of a little force. We see no reason however, why the same softening process should not accompany Langenbeck's method.

In closing this very imperfect sketch of the "prize essay," we will say that the author has proved the truth of his proposition by a series of experiments which seem to be satisfactory, and we must conclude that his labours have resulted in a useful and laudable contribution to the science of surgery.

II. *A Text Book of Practical Anatomy.* By ROBERT HARRISON, M. D., M. R. J. A., Fellow of the Royal Colleges of Surgeons of Ireland and England; Professor of Anatomy and Surgery of the University of Dublin, &c., &c. With additions by an American Physician, with Numerous Illustrations. 2d Edition. New York: Samuel S. and William Wood, No. 261, Pearl Street. 1855. (From the Publisher).

This is an old acquaintance in a new guise. There are few medical men of *our* time, who do not feel under obligation to the old Dublin dissector for its lucid teachings in the dissecting room. Among students, we believe it has justly enjoyed more popularity than any other work we have ever known on practical anatomy. Towards a work so long known and so universally esteemed, the duties of the reviewer are very light. He has only to record its transit from one edition to another, which of itself is enough to stamp it as a work of uncommon merit. In the present case, it appears enlarged and handsomely decorated with appropriate and well executed

plates, and "some valuable additions" made by Dr. Robert Watts, Jr. professor of anatomy in the college of physicians and surgeons of the University of the state of New York, and we take pleasure in recommending it to the profession.

III. *Nature in Disease, Illustrated in Various Discourses and Essays.* By JACOB BIGELOW, M. D., Physician and Lecturer on Clinical Medicine in the Massachusetts General Hospital; Professor of Materia Medica in Harvard University, &c., &c. Boston: Ticknor & Fields. 1854. (From James Woodhouse).

This is one of the prettiest little medical books, we ever remember to have seen. Its paper, type and binding, remind us of those sweet little volumes of poetry, its publishers, Messrs. Ticknor and Fields are so famous for getting out. It might, indeed, serve as an ornament for the center table, even side by side with those beautiful shells, which mariners bring us from distant seas, so often to be met with in the same locality; and of which, by the way, it tends strongly to remind us, inasmuch as they are more to be valued on account of their exterior appearance, than for anything they have ever had inside.

EDITORIAL AND MISCELLANEOUS.

The Medical Society of Virginia.

The annual meeting of this society will be held in Richmond on the *fourth* Tuesday in April, as the constitution directs.

Thirty-two years have passed away since the Medical Society of Virginia received its legislative charter. What has it done towards "the advancement of professional knowledge throughout the state"? It existed before the invention of the stethoscope by Laennec, or the discovery of the cell by Schwann; before Broussais wrote, or Andral and Louis marked by their pathological researches, a new era in medicine, and now with the ripeness of age about it, we cannot find that it has contributed one single fact to the medical literature of our country.

The Medical Society of Virginia has never existed. An association of physicians in and near Richmond, with 500 nominal members scattered throughout the state; an association in which Richmond has ever held the controlling power, for the manifest reason that all of its meetings have been held in that city, never can become the representative of the medical men throughout the state. The profession will not consent to make a yearly pilgrimage to this medical Mecca. The constitution must be altered, the society must change its place of residence year by year, and thus put every portion of the state on the same footing. Wherever it wanders, a nucleus will be formed, from which it might gather fresh elements of strength. The profession would feel that this was truly a state society, and every where a new interest would be excited.

What an expanded field lies before us, how many noble objects to pursue. Take one, the *Medical Topography of Virginia.*

Our state presents within its broad limits every variety of climate and disease. It stretches from the region of the live oak and cypress, to the bleak hills of the Alleghany; from the Atlantic coasts to the banks of the Ohio. The insidious intermittent, or the fierce congestive fever, reigns supreme in one direction; the valleys of Piedmont shew their typhoid endemic; and the mountains still remain in possession of the phlegmasias in all their intensity. If the society as it moves from point to point, would require at the hands of the profession an accurate sketch of the diseases incident to their locality, five years would not pass away before we might offer as the first fruits of our labours, *the Medical map of Virginia.*

Another subject stands invitingly open; a book of which the first chapter is not yet written. *The modifications of disease in the negro constitution.* Is the student fresh from Watson or Wood, with his new lancet and his armory of antiphlogistics, prepared to treat pneumonia in the negro? Has he been taught that the African constitution sinks before the heavy blows of the "heroic school" and runs downs under the action of purgatives; that when the books say blood letting and calomel, the black man needs nourishment and opium? Let the medical society of the largest slave holding state in the union be the first to lay the foundation of this new "Practice of Physic."

Much more might be said on this interesting subject. We might point to the *medical botany of Virginia,* a field which has remained

untouched for a hundred years. The work to which Clayton and Mitchell devoted a lifetime, cannot now command a single laborer. The mineral and medicinal waters of the state, are they not subjects worthy the attention of the profession?

Let the members of the society who have its true interest at heart, come together and infuse a new life into this stunted corporation, and we earnestly hope that their deliberations will advance the cause of science, and add dignity and honor to the profession.

The Morning Visit. By O. W. HOLMES.

* * * * * *

The Morning Visit—not till sickness falls
In the charmed circle of your own safe walls;
Till fever's throb, and pain's relentless rack,
Stretch you, all helpless, on your aching back;
Not till you play the patient in your turn,
The morning visit's mystery shall you learn.

'Tis a small matter in your neighbor's case,
To charge your fee for showing him your face;
You skip up stairs, inquire, inspect and touch,
Prescribe, take leave, and off to twenty such.
But when, at length, by fate's transferred degree,
The visiter becomes the visitee,
O then, indeed, it pulls another string,
Your ox is gored, and that's a different thing!
Your friend is sick; phlegmatic as a Turk,
You write your recipe and let it work;
Not yours to stand the shiver and the frown,
And sometimes worse, with which your draught goes down:
Calm as a clock your knowing hand directs,
Rhei, Jalapæ, ana grana sex,
Or traces on some tender missive's back
Scrupulos duos pulveris Ipecac;
And leaves your patient to his qualms and gripes,
Cool as a sportsman banging at his snipes.

But change the time, the person, and the place,
And be yourself the "interesting case,"
You'll gain some knowledge which it 's well to learn;
In future practice it may serve your turn.
Leeches, for instance, pleasing creatures quite,
Try them, and, bless you, don't you find they bite?
You raise a blister for the smallest cause,
But be yourself the great sublime it draws,
And trust my statement, you will not deny,
The worst of draughtsmen is your Spanish Fly!

It's mighty easy, ordering when you please,
Infusia Sennæ, capiat, uncias tres;
It's mighty different when you quackle down
Your own three ounces of the liquid brown.
Pilula, pulvis—pleasant words enough,
When other jaws receive the shocking stuff;
But oh, what flattery can disguise the groan
That meets the gulp which sends it through your own!
Be gentle, then, though Art's unsparing rules
Give you the handling of her sharpest tools;
Use them not rashly—sickness is enough—
Be always "ready," but be never "rough."

* * * * * *

Once more, be *quiet*—coming up the stair,
Don't be a plantigrade, a human bear,
But stealing softly on the silent toe,
Reach the sick chamber ere you're heard below.
Whatever changes there may greet your eyes,
Let not your looks proclaim the least surprise;
It's not your business by your face to show
All that your patient does not wish to know;
Nay, use your optics with considerate care,
And don't abuse your privilege to stare.
But if your eyes may probe him overmuch,
Beware still further how you rudely touch;
Don't clutch his corpus in your icy fist,
But warm your fingers ere you take the wrist;
If the poor victim needs must be percussed,
Don't make an anvil of his aching bust;
(Doctors exist within a hundred miles,
Who thump a thorax as they'd hammer piles,)
If you must listen to his doubtful chest,
Catch the essentials and ignore the rest—
Spare him; the sufferer wants of you and art
A track to steer by, not a finished chart;
So of your questions—don't in mercy try
To pump your patient absolutely dry:
He 's not a mollusc squirming in a dish—
You 're not Agassiz, and he 's not a fish.

And last, not least, in each perplexing case,
Learn the sweet magic of a *cheerful face;*
Not always smiling, but at least serene,
When grief and anguish cloud the anxious scene.
Each look, each movement, every word and tone,
Should tell your patient you are all his own;
Not the mere artist, purchased to attend,
But the warm, ready, self-forgetting friend,
Whose genial visit in itself combines
The best of cordials, tonics, anodynes.

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VARIETIES.

Hippocrates and Bacchus.

A Society has been formed for the purpose of procuring the legislative prohibition of the sale of fermented liquors, except for medical purposes. Should a law to that effect be enacted, the only question will be, What purposes are, or are not, medicinal? But that question will be rather what is termed a poser. For example, melancholy is a disease, and if brandy and water is permitted to be taken in cases of mental depression, there will be no end to keeping spirits up by pouring spirits down. A dram is a popular and efficacious remedy for a pain in the interior, but if that is to be allowed as an excuse for taking it, the majority of the population will be constantly having stomach-aches. Some people may think to settle the difficulty by referring it to medical men, who however, naturally, would be too happy to prescribe liquor to healthy applicants in the hope of getting them for real patients. An English Liquor Law treating strong drinks as drugs, would at any rate be a boon to the medical profession. For one draught that a physician now prescribes, he would have to prescribe thousands, if in him were vested the privilege of prescribing draughts of ale. One wonders in what terms a doctor would frame his receipe for the complaints that deans and chapters, for instance, are apt to be troubled with after dinner. Perhaps in some, such as the following:—*R. Vin: Alb: Hispan. seu Rubri quant. suff: cujus sumatur cyathus subinde, urgente siti:* which would be a technical order for unlimited port or sherry. Or the generous medicine might be ordered thus: *R. Vin: Cujusvis Oij, gradatim post prandium, hauriend: et rep si opus fuerit.* Another prescription might be given for a bowl of spiced wine, concluding with the direction, *Fiat Episcopus, statim sumendus.* Small glasses of brandy might be prescribed *pro re nata*, and an alcoholic mixture might be ordered by the formula *Misce pro pileo dormitorio, hora somni sumend.* In surgery windows we should see, in great gilt letters, such inscriptions as *Cerevisia Londinensis*, XXX *Opt:* or Barclaii Perkinorum *et Soc. Integra.* A new feature would have to be introduced into medical education, and the examiners at Apothecaries' Hall would require candidates for their diploma to understand the Beer Engine.—*Punch.*

New Children's Hospital in Paris.—Her Majesty the Empress of the French, in her solicitude for the necessitous classes, has induced the government to realize a project having for its object the benefit of unfortunate mothers whose children are attacked with disease. The prefect of the Seine, therefore, is busied with the construction of an hospital, to contain 400 beds, to be situated in the Faubourg St. Antoine, where children will be received on the same condition as in the French Children's Hospital at the other extremity of Paris — *Journal de Med.*

Promotions in the Medical Staff of the Navy.—The following passed Assistant-Surgeons have recently been promoted to the grade of surgeons: R. W. Jeffrey, to date from August 5th, 1854, T. M. Potter, September 17th, S. R. Addison, September 22nd, W. A. Neilson, November 21st, to fill the places of Surgeons Washington and Turk, deceased, and Surgeons Guillou and Terrill, resigned. To the vacancies made by these promotions and by the resignation of Assistant-Surgeon Tunstall, the following appointments have been made: W. G. Hay, Assistant-Surgeon from September 12th, D. B. Conrad, September 20th, J. E. Semple, September 22nd, W. T. Hord, November 1st, W. M. Brown, November 25, all of which appointments have been confirmed by the senate. *N. Y. Times. Feb. 19th*, 1855. .

Coroner's Inquest.—On the 18th of February Eliza McGovern, of 223 East-Twentieth St. New York, died, as it was charged, from medical neglect. When about to be confined, she sent to the *Demilt Dispensary* for an accoucheur. A young member of the profession, Dr. Longrigg, was sent to her assistance, but he declared himself incompetent to interfere, and before other aid could be procured, the woman died. Coroner O'Donnell and his deputy, Dr. O'Hanlon investigated the case, and the jury declared in their verdict that the cause of death was a rupture of the womb, that Dr. Longrigg was wholly incompetent as an obstetrician, and that his superior Dr. Bibbing was culpable in sending such an inexperienced man to attend the deceased.

NECROLOGY.

Golding Bird, M. D., F. R. S., died on the 27th of October. For some months previously his failing health had obliged him to relinquish professional exertion. He died of disease of the kidney, one of that class of maladies which he did so much to elucidate, and on which he is one of the principal authorities.

William Turk, surgeon U. S. N., died at Newark, N. J. on the 20th of November. Dr. Turk entered the Navy in 1800, and was the oldest but two on the list.

G. F. Turner, M. D. surgeon U. S. A., died at Corpus Christi on the 20th of October, of yellow fever.

Dr. Zabdiel B. Adams, an old an respected physician of Boston, died on the 25th of January, of typhoid fever.

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ness of which is so seldom called in question at the present day, as the one asserted in this proposition; and the question which is so often, and so significantly asked, is, how can we prescribe for a disease without first knowing what the disease is? or, how can we treat a disease successfully without a knowledge of its nature?

The necessity of this knowledge, so far as it is attainable, I admit, but I deny that this is the great and essential prerequisite to a sound, rational, and successful practice; and it is my purpose to show that the right application of remedies has not that intimate, entire, and absolute dependence upon our knowledge of the nature or proximate cause of disease, that it is generally supposed to have,—that the former does not flow directly from the latter;—that the proposition under consideration is therefore untrue; and that, if it is not calculated to mislead in practice, it has a strong tendency to divert the medical enquirer from the true and only course by which the results he is seeking can be obtained.

The proposition itself is based evidently upon two other propositions, or rather suppositions, both of which will appear on the slightest examination to be false. The first is, that we can ascertain the nature of diseased action; and the second, that the nature of the disease being known, we are in the possession of remedies exactly calculated to counteract it.

It would be worse than useless to be told that we must regulate our practice according to the nature of the disease, were it not upon the supposition that it is possible for us to ascertain its nature, and the requirement would be equally vain except upon the supposition that the nature of the disease being known, the means of obviating it were at our control. That both these suppositions are entirely groundless is so plain to my own mind, that I would not spend a moment to prove them so, were it not for the readiness with which such errors are assented to, or entirely overlooked in our zeal to maintain a favorite doctrine or theory, or even in yielding our assent to a proposition which has only the doubtful merit of great plausibility. And besides they present the very points on which the question hinges, and a right understanding of them is of primary importance to the object of our discussion. I shall therefore spend a few moments in examining each of them. And first; do we know anything, with certainty, of the nature of disease? No one I think will find it difficult to answer this enquiry for himself. If he does, let him turn to his authorities on the subject and see if he

can find any two leading pathologists who are agreed upon it. But the supposition is perhaps, that although we are not yet in possession of this knowledge, we have the means of acquiring it. What then are those means? Having become thoroughly acquainted with anatomy and physiology in the outset, can we gain this knowledge by careful, inductive reasoning from the probable, remote, or even the known causes of disease? Can we obtain it by carefully observing its symptoms and progress, in connection with all the other circumstances attending it? or from both these methods combined? I think not, and for the reason that notwithstanding these are the very methods that have been employed so assiduously from time immemorial, there is no coincidence of opinion among writers concerning the nature of a single disease. Says a late English author, "the symptoms of disease do not constitute the disease itself, they are rather an algebraical character designating an unknown quantity, but which in the hands of a skilful mathematician may be managed as readily in working out a problem, as if such unknown quantity were a sensible object." Now I object to all such attempts to convince ourselves that we already possess, or can easily obtain, what must from the nature of the case forever remain beyond our reach. The truth is, the subject itself is beyond our comprehension. We can explain the nature of disease just as we can explain the nature of life. We know nothing of either but by its effects.

It should be better understood than it seems to be at present, that morbid anatomy, even when carried to the greatest perfection of which it is susceptible, can throw no light on this subject; for it must be recollected that the morbid appearances on dissection are only the effects of disease and afford no explanation of its nature. These do not constitute the disease any more than the symptoms. It may be said that such and such appearances are the effects of inflammation. But what do we know of inflammation, is the question, aside from its effects? For it would be as unphilosophical and as useless to prescribe for the effects as for the symptoms. Is it sufficient for us to know that a disease is inflammation, and that it is noted in a particular part or tissue, to enable us to decide with certainty as to the treatment? Is its nature always the same? Is it the same in all its stages, so that the same means that are required in the outset are to be continued through its progress? Is it the same during the prevalence of different epidemics, even when there is no appreciable variation in its outward manifestations, so that means of the same kind that have been found suc-

cessful in one season are to be employed in all others? In short, does any knowledge we may profess to have of its nature direct us at all in the treatment?

The pathology of inflammation, if it is not as well understood, has at least been as throughly investigated, as that of any other morbid process. It has employed the talents of the wisest men for ages, and yet how little we know of its nature! Hardly light enough has been shed upon it to make the darkness visible. Let us examine the matter a little farther, and if we cannot determine how *much*, let us ascertain how *little* we know of it. It should be borne in mind that we are not now in search of the phenomena or symptoms of inflammation, nor of its effects or consequences, but of the disease itself,—its nature. It is the disease that we are to combat, for we are told that to prescribe for its symptoms, or to try to obviate its effects, is not to direct our attack aright. Could we go so far as to establish any one of the various theories that have been instituted to explain the manner in which the solid and fluid particles of the body become disarranged in inflammation, we should have taken one step towards the attainment of our object. It would remain, however, to explain the causes of this disarrangement, and to show how the nervous, vascular, lymphatic and other systems act and react upon each other, taking into the account also the agency of life, (for inflammation does not take place in inanimate bodies,) in producing it. If we have not brought our enquiries on this subject to a satisfactory conclusion, it will be admitted, I think, that our endeavours to elucidate the nature of inflammation have been brought to a stand. We have made sure of little else than the futility of all the reasonings and theories by which we have sought to explain the intimate nature of the inflammatory process. And what has here been said of inflammation will apply to febrile, if not to all diseases that come within the cognizance of the physician.

The second supposition on which our proposition was founded, and on which I proposed to comment, implies that the nature of disease being known, the means of counteracting it are at hand. I am inclined to believe, that however clear our knowledge of morbid processes and alterations may become, such knowledge will avail us little in their treatment. It would remain a matter of experiment after all, whether we could counteract those changes. Our diagnosis under such circumstances would of course be always certain, and we should be aided in our prognosis, but in our treatment we should be obliged to make up

our judgment mainly, if not wholly, by referring to the symptoms. A knowledge of the relation which our remedies would sustain to those internal changes would be wanting, and to gain this, experience would be our only guide, just as it is now in learning the relation they sustain to the external symptoms; and we might find the study as difficult in the one case as in the other.

And besides, the powers of remedies are not yet sufficiently known, and as to their *modus operandi* in curing disease, it is as little understood as that of the various organs of the body in producing it. Hypothesis, theory, and conjecture have been the means used to enlighten us on the former subject, just as they have on the latter; and the conclusions that have been reached, are as various and contradictory. And on this account, if on no other, the assumption that the means of counteracting disease can be easily applied when its nature is known, must be false.

Having thus presented what I conceive to be sufficient proofs of the unsoundness of the proposition referred to at the commencement of this essay, I trust I may be indulged in a few remarks upon its injurious tendencies.

Whether the effect of reasoning, which is so freely admitted, and so freely practiced too, in medicine, has been to advance or retard its progress, is a question. But as beneficial as it may be, there has not been heretofore, nor does there appear to be at present, any special necessity for urging physicians to adopt it; for in whatever their other short comings may be, we have volumes of proof that they have not been remiss in the employment of their reasoning faculties. If the object of this proposition, therefore, is simply to make us reason, it is entirely uncalled for. The truth is, physicians are sufficiently inclined to reason. They pride themselves much more on their logical powers than on their tact and skill in observation, and hence it is that our publications are overburdened with elaborate theories, and hypothetical explanations, while they contain so few of the results of true experience. There is a vitiated taste in the minds of medical men on this subject. They have a far better relish for this kind of reasoning, than for sober truths, or plain matters of fact. The most weighty truths relating to the effects of remedies, for instance, are not at all received, unless they can be duly explained or satisfactorily accounted for. Is it not the obvious and legitimate tendency of this proposition to perpetuate this state of things? To prescribe for symptoms or adopt a practice, how-

ever successful, for which a physiologico-pathological reason or explanation cannot be given, is rank empiricism, while to originate or ingeniously support a popular theory, is a sure passport to professional eminence! A man must invent an hypothesis, or give a new explanation of a disease, or the *modus operandi* of a medicine, and it matters little whether it tends to aid us in the cure of the one, or in the right application of the other, if it is ingenious and plausible his reputation is established. And there is little prospect of any abatement in this "detestable rage for explanation," as it is termed by a late French writer, at the present day.

Analogous to this search after the nature or proximate cause of disease, are the attempts that have been made to account for its various symptoms. The results of labours of this sort have perhaps been more satisfactory; but it is important to remark that these results have as often been attained from witnessing the effects of remedies, as from any other means, and that generally the results acquired in this way, are the only ones of any practical tendency. I would by no means discourage enquiries of this kind, any more than I would put a stop to investigations concerning the nature of disease, provided they are pursued in a manner calculated to lead to useful results. In both cases, however, we are extremely liable to be led into the wide field of conjecture, instead of following the narrow path of careful, inductive philosophy. It was a maxim of Southwood Smith, I believe, a wise and important one too, and one which he himself would have done well to have followed more closely than he did, that, "to make any real progress in knowledge, we must keep steadily in view the kind of information which it will be possible for us to acquire, and which it will be to our purpose to seek, and dispossess our minds of the phantoms that have so long enthralled and abused them." The reasoning that has been adopted to account for the origin of symptoms, has often been as fanciful and as objectionable as in other instances, and it is remarkable how the passion for the credit of originality, leads the authors of such speculations to publish them, and pertinaciously adhere to them, when even if their correctness could be established, they would be of no kind of use, either as it regards their prevention or treatment. Dr. Baillie's method of accounting for the periodicity of intermittents, will doubtless suggest itself to some of my readers as an illustration of the truth of this remark. He found that in those localities where intermittents prevailed, animals were subject to a disease which he proved by

post mortem examinations to be of a similar character; but in animals it was continued, while in man it was intermittent. His explanation of this phenomenon was this: men are perpendicular by day and horizontal by night; whereas animals are horizontal both by day and night! A multitude of similar discoveries, originating too from the same kind of induction, might be adduced, which, admitting them to be true, are of just as much importance to the science of medicine as the case I have cited. It is obvious that Dr. Baillie's explanation, if true, can be turned to no practical account. I mistake, however, for it was suggested by his reviewer, that those inhabitants of malarious districts who would prefer a continued to an intermittent disease, could have their desires gratified by walking on all fours.

Since pathologists have ceased to reason so freely to find out the nature or proximate causes of disease, this end has been sought by the more precise method of investigating its anatomical characters; and hence morbid anatomy has latterly engaged their attention more than any other department in medicine. In our own country, as well as in England, the labours of many have been almost wholly engrossed by it; but we are particularly astonished at the zeal and industry with which the French pathologists have applied themselves to *post mortem* examinations. So devoted to this work have they been, and to making out the relations between the external symptoms and internal lesions, that they have evidently lost sight of the grand object which ought ever to be kept in view, viz:—the successful treatment of disease. The treatment of fever, for instance, in the Parisian hospitals, seems to have been adopted with particular reference to allowing the disease to run its course unmolested, in order that its anatomical characters, unchanged by the interference of the physician, might be made known. "The continental school," says an English reviewer, of a late French work, "regards patients as the raw material of science, and the physician fully imbued with its spirit, detects a pleurisy or a hepatitis, with precision, traces its phases with scientific accuracy, and, after he has let his patient die, he points with triumph to the confirmation of his diagnosis." But there is a similar state of things existing in England, which led Sir Benjamin Brodie to remark in one of his lectures, "your patient wishes to be cured; he has of course no other reason for consulting you. This is a consideration which seems occasionally to be quite forgotten. It is a reasonable one, notwithstanding." The minuteness with which the anatomical characters of typhus have been stu-

died by Europeans, seems to require, in order to facilitate their description, an enumeration and classification, if not a nomenclature, of all the mucous follicles and glands of the intestines; and in our own country, the discovery of microscopic crystals in the alvine evacuations of patients labouring under this disease, was announced some years ago as a startling discovery. What, we are led to enquire, has all this to do with the treatment of fever? And yet all this is in strict conformity with the doctrine which requires us to regulate our practice according to the nature of the disease.

It would be pertinent to the object of our present enquiry, to enter at length on the subject of morbid anatomy, and examine its claims, its relative importance compared with other branches of medicine, and ascertain its capabilities of furnishing the information we need, or its real value in directing us to the great object of our pursuit, the best way of treating diseases. Whoever will do this, and at the same time point out its abuses as well as its uses, and the manner in which we are liable to be misled by it, and show why it occupies too disproportionately the attention of pathologists, will confer a benefit upon the profession. I cannot pretend to do this; I can only offer a few brief reflections on the subject.

Morbid anatomy is said to be "our main source of improvement in medicine," and "the only satisfactory way of investigating disease." It is said to have "been as the spear of Ithuriel to medicine," to have "disclosed what is demonstrable and what is vague," and that "it has given and will give to our science all the genuine inductive character of which it is susceptible." This is placing by far too high an estimate upon morbid anatomy. If I mistake not, it can be shown that instead of being our main source of improvement, it is pursued at present to the neglect of more important branches of pathology; that the results it gives are not generally the most satisfactory, inasmuch as they do not make things clear at the bedside of the sick; that the information it affords, though demonstrable as to the things themselves, is vague and uncertain in regard to their uses, and is therefore seldom to our purpose; that it often fails of establishing the relation between symptoms and lesions, and that though it sometimes succeeds in this, yet inasmuch as it fails to point out the relation of our remedies to those lesions, or even of furnishing sufficient data, usually from which accurate conclusions can be drawn on this subject, the information it gives is not that which we most need to possess. It may be also shown,

as I think, that although in some respects it may be said to give to our science an inductive character, it has thus far at least furnished frequent occasions for wild conjectures, absurd theories, and the most illogical conclusions: that in many cases it is liable to mistake effects for causes and causes for effects; and in others to place mere coincidences in the relation of cause and effect; and finally, that the indications of cure derived from it, have oftener been erroneous than otherwise. On the other hand, its uses are important. The information derived from it is often highly satisfactory. If it can disclose nothing else, it can demonstrate the fatal tendency of mere functional disease, or disease attended with no apparent disorganization; it can elucidate many other points in pathology which it is useful for us to understand, and others still which it will be well for us to know, though at present they may be of but little use in practice.

It cannot be too distinctly impressed upon us, however, that morbid anatomy is not pathology. It is only a branch of it, and an unimportant one too, compared with some others. On some of the most essential points in pathology, dissections can give us no light whatever. For instance, the all important question that presents itself in almost every case, whether the disease is sthenic or asthenic, and requires a depleting or repleting treatment, must be decided from the symptoms alone, or from these in connection with our knowledge of the prevailing diathesis, or peculiar epidemic constitution, as it was termed by the elder writers. Whether a disease is malignant or non-malignant, its type, the laws of its progress, and termination, whether it has any tendency to remission or intermission, all these must be learned from the same source. On these highly practical points morbid anatomy avails us nothing. So in regard to inflammation, whether it is acute or chronic, entonic or atonic; whether it tends to suppuration or gangrene; or is liable to metastasis, are questions of great importance as it regards the treatment, but they must be decided from the symptoms merely. In short, it is sufficient to establish the importance of symptomatology over morbid anatomy, to state that all we know, or can know, of the internal changes during the progress of disease must be learnt from the symptoms, and that such knowledge is useless, entirely so, unless it can be ascertained in the living body from the symptoms.

I ought perhaps in conclusion to awswer, more explicitly than I have yet done, the question which the reader is doubtless, ready to ask;

what is our true course of investigation on this subject? or, on what must the correct treatment of disease be founded? As I fear that I have already trespassed on the patience of my readers, I shall answer it in the briefest manner possible, by confining myself to the following statements or propositions.

1st. We know that disease exists, only from its symptoms.

2d. All that we know, or can know of its nature or proximate cause, during its progress or of the organic changes it produces, must be learnt from the symptoms.

3d. When the symptoms are removed, the disease is cured.

4th. The indications of cure are therefore to be derived from the symptoms, mainly. The causes, however, when these can be ascertained, are to be taken in connection with the symptoms, as are also the habits, modes of life, peculiarities of constitution, etc., and also the anatomical characters of the disease when these can be discovered, or clearly inferred from the symptoms, and from our having witnessed them in *post mortem* examinations in similar cases; but all these latter circumstances combined are of far less consequence for this purpose than the symptoms alone. They are however to be taken in connection with the symptoms, and for the purpose of making out our indications in the treatment, are to be regarded as symptoms.

5th. The proposition which I would substitute for the one I have been endeavouring to oppose, is this: The correct treatment of disease must be founded on a knowledge of the relation which our remedies sustain to the symptoms. This it may be said is attaching an undue importance to symptomatology. The remark may be true, but, it may be asked, is it not equally true that by far too little attention is paid to it at present? Such is my belief; and this conviction is my apology for dwelling so long on this subject. I will simply add in conclusion, that my principal objection to the opposite and prevailing doctrine, is its tendency to divert the attention of the profession from the field of clinical observation, and to direct it to researches which must yield a far less fruitful harvest.

ART. II.—*Hospital Practice.** By GEORGE L. UPSHUR, A. M., M. D., Surgeon to U. S. Marine Hospital, Norfolk, &c., &c.

CASE XXXVI.—*Compound Fracture of the Leg—Gangrene—Amputation—Recovery.*—J. Martin, æt. 35, of sanguine temperament and robust frame, was admitted April 7th, 1854. While standing on the stock of a "foul anchor," which was hanging from the bow of the ship Alexander, in Hampton Roads, his right leg, near the ankle, was caught in the bight of the cable—a very heavy one of iron—which produced a compound fracture of both tibia and fibula about three inches above the joint. The laceration of the soft parts extended from the external malleolus obliquely across the front of the leg, for a distance of five inches. The upper extremities of the fractured bones protruded about two inches from the wound.

He was brought to the Hospital at 4 o'clock in the afternoon, the accident having happened at 10 A. M. He had lost a good deal of blood, notwithstanding the application of a rough compress and bandage on board the ship. Upon removing these, the hemorrhage became so profuse as to leave no doubt, that the anterior tibial artery had been torn across. Having reduced the fracture, a pillow, side-splints, compress, and roller made up the dressing. Ordered 50 drops of laudanum to be given every hour until he slept, and placed a tourniquet upon the femoral artery, so that the hemorrhage could be controlled at any moment should it become necessary.

April 8th.—Slept badly; hemorrhage seems to be controlled; pulse frequent, and full; foot warm to the toes. Ordered the bandage to be kept constantly wet with cold water, and pulv. opii, gr. ij, to be given at bed time.

9th.—Was awake all night with pain in the leg; pulse soft, 104; slight erysipelatous blush above the wound, and the whole leg a good deal tumefied; no hemorrhage; some appetite. Continue cold water, and opiates.

10th.—Removed the dressings; wound looks gangrenous around the edges, and discharges a sanious pus; whole limb below the knee is swollen and erysipelatous; suffers very little pain unless the leg is

* Continued from Vol. III, p. 381.

moved. Placed it in the ordinary fracture box, with the wound exposed, and continued cold water dressings.

11th.—Rested well; wound looks as it did yesterday; fracture very movcable; no pain; pulse 96, and soft. Continue treatment.

12th.—Suffers no pain; wound looks very foul; edges still gangrenous, and just above, on the spine of the tibia, a large purple vesicle has formed; the whole limb is much tumefied, and the skin on the anterior face intensely red. The vesicle burst during the day, revealing beneath it a large abscess, which discharged freely an unhealthy pus; gangrene is extending. Dress with equal parts of cold water and pyroligneous acid.

13th.—No alteration in the appearance of the limb; the patient, however, is pale, pulse rapid, appetite gone, and his system evidently sympathising with the injury. Continue local applications. Give milk toddy and beef broth freely, and a wineglass three times a day of the following: R. *Pulv. Cinchon.* ℥j; *Elix. Vit.* ℥j; *Aquæ, Oj. M.*

14th.—No improvement; whole limb threatens to become gangrenous, and the patient's general health is suffering severely. Being fully satisfied that the limb could not be saved, I amputated it, by the circular method, at a point about three inches below the tubercle of the tibia, in the presence of Drs. Moore and Fitzgibbon, and Messrs. William Cooke and R. S. Bernard, Jr., medical students. Chloroform was administered, but, although a large quantity was inhaled, the patient was only partially under its anesthetic influence, while its effects were very unpleasant, such as raving, uncontrollable restlessness, and intense rigidity of the muscular system, amounting at times to well marked spasm. He lost about 24 oz. of blood, it being very difficult to keep the femoral artery steadily compressed because of his constant and violent jactitation. He raved for two hours after he was put to bed, and re-action came on very slowly. After it was fully established, ordered 50 gtt. Tr. opii. to be given every hour until he became composed.

An examination of the leg showed a comminuted fracture of the tibia; transverse fracture of the fibula; the anterior tibial artery and nerve both torn across, and extensive laceration of the muscular and cellular substance. It would have been impossible to save the limb.

15th.—Took a drachm and a half of laudanum, when he fell asleep, and rested well the whole night; pulse this morning is full, soft, 76; complains of some pain in the stump, no secondary hemorrhage; skin

warm and perspirable. Discontinue stimulants, and give ½ gr. morph. sulph. at bed time, if he should require it.

17th.—Rested badly, took no anodyne last night and suffered some pain in the stump, pulse 76, irritable, appetite. In the afternoon dressed the wound, edges of the incision look pale, and there was a good deal of laudable puss in the dressings, union by first intention only at the corners. Ordered ½ gr. morph. sulph. at bedtime.

On the 21st the granulations were very abundant and red, and the patient's general health rapidly improving. All the ligatures came away by the 25th. The stump was entirely healed and the patient walking about on the 26th of May, but did not leave the house until July 12th.

Case XXXVII.—*Carcinoma of the Liver and Pancreas.*—William Dellano, æt. 39, married, was admitted April 27th. He was seized on 18th of March, with pain at the epigastrium, a feeling of lassitude, constipated bowels, and the general symptoms of acute dyspepsia. Up to this time, he had enjoyed good health, and although a spare figure, had been able to endure a good deal of fatigue and exposure. Has never had a chill or fever. He was treated with purgatives in large doses, blisters to the abdomen, cups, &c., without benefit. *Condition when admitted:* Skin nearly natural in color, but dry and harsh—excessive emaciation, no fever, pulse full, soft, 76; tongue clear, red at the tip, large, flabby, and covered with fissures, no nausea—bowels very costive, never moved without medicine, appetite morbidly good; in the abdomen he has more uneasiness than pain, which is not increased by pressure, no perceptible enlargement of the liver or spleen, no chest symptoms, complains of wandering pains which begin in the left side near the anterior extremities of the short ribs, and terminate in the left shoulder—sounds of the heart normal, no thirst, is very watchful at night, and spirits excessively depressed, can rest in any position without an increase of discomfort. Noted the case as one of considerable obscurity, and ordered one of the following pills three times aday: ℞. *Mass. Hyd. gr. xx; Pulv. Aloet, gr. xv; Pulv. Rhei, gr. xii; Ext. Gentian,* ℈*ij;* M. Pil. 20. *Diet*—Bread and milk.

April 30th.—Bowels have not been moved since he entered; complains of pain and distension at the epigastrium; appetite ravenous. Continue pills and give this powder at once: ℞. *Pulv. Rhei, gr. xxv; Soda Bi-Carb. gr. xx;* M.

May 1st.—A small stool during the night; pain in the abdomen is sharp, lancinating, and paroxysmal; is alleviated by walking about, or by lying on the belly; appetite unaltered; no fever, nor thirst; other symptoms as when he entered. Continue treatment.

2d.—No stool; pain not increased upon pressure, but is very distressing; abdomen very flaccid, and cannot discover any tumor or hard places; there is slight uneasiness upon pressure just at the pit of the stomach; is very desponding, and irritable, some thirst, and appetite still good; vomited a little this morning after eating, pulse regular, soft, 76. Continue pills. R. *Sol. Senna*, ℥j; *Manna*, ℥ss; *Magnes. Sulph.* ℥j; *Sem. Cardam.* ʒj; *Aqua Bullient*, Oj; *M.* A wineglassful every two hours until the bowels are freely moved.

3d.—Bowels moved twice, but without relief from pain. Discontinue pills. R. *Bismuthi Sub-Nit.* ʒj; *Pulv. Rhei*, ʒss; M. Chart. 8. One three times aday, and at bed time ½ gr. morph. sulph. if he has much pain.

5th.—Still suffering; bowels excessively constipated; symptoms but little changed since his admission. Double the dose of bismuth, and apply a blister 6 x 6 to abdomen.

On the 1st of June, there had been no improvement in his condition. The skin was beginning to assume a straw color; the bowels, which had all along been confined, now became loose, the dejections being liquid, muddy, and very offensive; the appetite was whimsical; the emaciation excessive, and, when resting on his back, a hard, flat tumor, extending from the right hypochondrium over to the left of the epigastrium, could be distinctly felt. About this time, the whole right limb, from the toes to the groin, commenced to swell and to be very painful, while he was tormented with frequent lancinating pains across the abdomen. The treatment consisted of stimulants, nourishment, anti-nauseants; counter-irritation, anodynes, and astringents. In spite of all, however, he continued to get worse, and expired on the 27th of June, having, for two or three days previous, exhibited symptoms of mental derangement.

Autopsy Twelve Hours after Death; Abdomen only Examined.—*Peritoneum*—opaque, thickened, and contained a gallon of straw colored, offensive serum; omentum majus devoid of fat, contracted, and nearly black. *Stomach*—diminished in size; mucous membrane soft, thickened and purple; both the cardiac and pyloric orifices were carcinomatous. *Small intestine*—atrophied, pale, easily torn. *Large in-*

testine—nearly natural except it was diminished in calibre. *Mesenteric glands* enlarged, and carcinomatous. *Liver*—extended three inches below the ribs, and far over into the left hypochondrium, overlapping, and completely concealing the stomach; its surface was adherent, in several places, to the diaphragm, by old lymph bands, and was studded with innumerable yellowish white spots, some of which were of circular, and others of irregular outline, giving to the surface a motley appearance. On cutting into the substance of the organ, scarcely a vestige of normal structure could be found. Here and there, the true glandular tissue was visible, but nearly the entire organ had undergone cancerous degeneration; it was dense, very hard, and as difficult to cut as leather; the scalpel giving out a decided friction sound while passing through it. The *pancreas* presented, in an equally marked degree, the carcinomatous deposite—there being scarcely a vestige of its proper structure left. The *spleen* was atrophied to one fourth of its natural size.

Case XXXVIII.—*Gonorrhœal Rheumatism.*—James Fetcher, æt. 21, dark hair and eyes, stout, and previously healthy, was admitted on 3d of September 1853. Eight weeks before, he contracted gonorrhœa, from which he was only partially relieved. When he entered, there was considerable discharge from the urethra, accompanied by ardor urinæ, and chordee at night. Two weeks ago, commenced feeling some pain in the muscles on the back of the neck, and, within the past few days, the shoulders, elbows, wrists and ankles have become involved. He has never had an attack of syphilis, or rheumatism before. This is the third attack of gonorrhœa. There is no swelling nor redness of the joints, but he suffers much pain in them especially at night—the pain is not metastatic. Ordered a tablespoonful, three times a day, of Chapman's copaiva mixture.

Sept. 7th.—Urethral discharge has ceased, but the rheumatism continues. ℞. *Potass. Iod.* ʒij; *Aquæ*, ℥iv; M. A teaspoonful three times a day.

This treatment was persevered in with a steady improvement, and he was discharged cured on 4th of October.

Case XXXIX.—*Dropsy following Miasmatic Fever.*—Alfred Pearsall, æt. 19, hazel eyes, dark hair, very stout, was admitted 20th Oct., 1853. Has been trading up James River, and was seized on 13th with chill, general aching, and fever; paroxysm every afternoon; face and lower extremities very œdematous; is prostrated; pale; pulse

full, 100; tongue pale, clear, and flabby; bowels regular; but little appetite; thirst; slight cough; no nausea; no perceptible enlargement of liver, or spleen; sounds of the heart normal; no chest symptoms; has taken no medicine. ℞. *Quinia Sulph. gr. xx; Pil.* 6. One every two hours, commencing to-morrow morning.

Oct. 22d.—Has taken only half the pills; face more œdematous; other symptoms unaltered.

23d.—Œdema less; bowels regular; pulse full, 104; had a very slight paroxysm yesterday; appetite returning. ℞. *Ferri. Sulph.*, *Pulv. Scillæ, Mass. Hyd. aa. gr. xx; Ext. Gentian, ℈ij;* M. Pil. 20. One pill three times a day.

24th.—Some effusion into cavity of peritoneum, respiration somewhat oppressed; bowels confined; thirsty; has missed the paroxysm; œdema of face and limbs unaltered. Continue treatment.

31st.—Since last note, the effusion has increased; very little secretion of urine, and bowels torpid. Was seized this morning, after complaining a good deal of headache, with a strong convulsion; found him, half an hour afterwards, with a full, hard, bounding pulse, throbbing carotids, and flushed face; and perfectly insensible. I took at once 32 oz. of blood, *pleno rivo*, from the arm, which reduced his pulse, paled the cheek, and restored his consciousness. Ordered a drop of croton oil, combined with 4 grs. of calomel, every four hours until the bowels should be freely moved.

Nov. 1st.—Slept well; four tolerably large, liquid stools from two pills; pulse soft, 80; feels better altogether; no headache nor drowsiness; effusion less marked; appetite good. ℞. *Elaterii, gr. j; Saponis, q. s.* M. Pil. 4. One pill every morning. ℞. *Calomel, gr. xij; Pulv. Digitalis, gr. iij; Pulv. Scillæ, gr. xx.* M. Pil. 12. One three times a day.

2d.—Not so well; headache and nausea; six watery stools; appetite less; pulse full; no alteration in effusion. Continue treatment.

4th.—Mouth is a little sore, but cannot detect mercurial fetor; pulse still full; no headache; bowels very loose; effusion rapidly disappearing. Continue treatment.

6th.—Decided ptyalism; all the symptoms improved. Discontinue pills. ℞. *Potass. Bitart. ℥ss; Aquæ, Oj;* M. Use as a drink instead of water. He continued to improve, and was discharged cured on 14th December.

Case XL.—*Pneumonia—Death.*—Jesse Ross, æt. 35, married, very stout, was admitted on the night of March 3d, 1854. Saw him on

the 4th. He was wrecked on Cape Henry beach ten days ago, and very much exposed, at the time, to cold and wet. Four days after, Feb. 27th, was seized with chill, fever, cough, and dull pain in left side just under the scapula. He was seen by a Quack, who pronounced it a case of rheumatism, and, giving him "some hot stuff" to rub with, took his departure. He had an attack of remittent fever last fall. *Present condition*—Groans a good deal; complexion sallow; face deeply flushed; pain in left side, but not sufficiently severe to prevent deep inspiration; respiration hurried, 48; pulse full, 128, and resisting; bowels moved twice since last night; cough urgent and loose; sputa abundant, tenacious and very rusty; no appetite; skin hot. *Physical signs*—Percussion flat in left lung, posteriorly from supra scapula space as far down as middle of lower lobe, with intense bronchial respiration. There is slight crepitus at the lower portion of the lobe, just on the borders of the flat percussion. On the right side, the percussion is clear, and the respiration puerile. Ordered 10 oz. blood to be taken from left side by cups. ℞. *Hyd. Submur. gr. x;* Pil. 8. One every two hours, with a tablespoonful of the following: ℞. *Tart. Emet. gr. ij; Syr. Scillæ,* ℥ss; *Tr. opii,* ℥ss; *Aquæ, q. s.* ℥iv; M.

March 4.—*Evening.*—Says he feels a little easier; pulse very hard and full; took 8 oz. of blood from the arm, which reduced his pulse decidedly. Continue treatment.

5th.—Passed a wretched night; mind wandering; sweats profusely; bowels moved twice; tries to get out of bed to walk about; respiration labored, 40; pulse 124, full and resisting; skin hot; thirst urgent; no pain; decubitus on the back; coughs incessantly; sputa abundant and the color of prune juice. Continue treatment.

Evening.—Exacerbation of fever; pulse very full, and frequent; incontinence of urine; no fulness at the hypogastrium. Ordered 10 grs. Quiniæ Sulph. to be given early to-morrow morning; add gr. j more of Tart. Emet. to the solution.

6th.—Passed a bad night, but looks better, and respiration is less hurried, 30; pulse 120, not so full; tongue dry, brown, and heavily coated; sputa unaltered; very restless; two stools; faced less flushed; took the quinine at sunrise. Physical signs as yesterday. Continue treatment, and repeat quinine at once.

Evening.—Very restless; sweats profusely; countenance anxious; pulse less forcible, 148; breathing embarrassed; expectoration very

abundant and more rusty, if possible; is taking ½ gr. tartar emet. at a dose; no nausea. ℞. *Pulv. Dover, gr. xv; Tart. Emet. gr. ½*; M. To be given at once.

7th.—Rested quietly until 11 o'clock last night, when he was suddenly seized with rattle, and expired at half past 12. No autopsy.

Case XLI.—*Gonorrhœal Rheumatism.*—Allen Campbell, æt. 24, was admitted June 14th, 1854. Has gonorrhœa of ten days standing, the discharge from urethra being yellowish, and not very abundant; there is a painless bubo in the left groin; has never had syphilis, nor any sores on the penis. Ordered a blister to the bubo, and two copaiva capsules to be taken three times a day.

On the 17th, the gonorrhœa had ceased, and he was seized with pain in the left wrist, which soon became red and swollen. ℞. *Vin. Colch. Rad.* ℥*j; Magnes. Calc.* ℥*j; Magnes. Sulph.* ℥*j; Aquæ, q. s.* ℥*iv.* M. A tablespoonful every three hours until it purges him freely.

On the 19th, several other joints had become involved; he had a full pulse, and suffered a good deal. Ordered a tablespoonful of lemon juice every two hours.

20th.—Suffers less pain; bowels confined; right knee is considerably swollen; pulse full, 96; tongue clear and moist; no appetite. Continue lemon juice, and give gtt. j Ol. Tiglii, at once.

21st.—Pill acted freely, and with much benefit; less tumefaction, redness and pain about the joints; pulse softer, and altogether is much improved. Continue treatment.

On the 25th, the urethral discharge disappeared, and with it was entire cessation of pain, redness, &c., in the joints. The gonorrhœa ceased on the 10th of July; there was no return of rheumatism, and he was discharged on the 18th cured.

Case XLII.—*Syphilitic Iritis.*—Franklin Webber, æt. 25, very stout, and of robust constitution, was admitted July 12th, 1854. Three months ago had an attack of primary syphilis, which lasted two weeks, and got well without the formation of bubo. About six weeks ago, he was taken with headache, unaccompanied by fever, which continued for two weeks, when the left eye became very painful, red, and intolerant of light. When he entered, the conjunctiva was intensely injected, the cornea opaque, the pupil contracted, irregular, and immobile, the iris filled with yellowish spots, injected, and very painful on exposure to light. The bowels were confined, the pulse full and frequent, and the head aching. Ordered ten leeches to be applied to the left temple,

and one of the following pills three times aday. R. *Calomel, gr. xxiv; Pulv. Opii, gr. ij;* M. Pil. 12.

On the 18th, he was slightly ptyalised, and immediately commenced to improve rapidly. On the 24th, the eye could be exposed to strong light without inconvenience; the pupil was very mobile, the conjunctivitis had disappeared, and the whole eye had a natural appearance. He was discharged on 26th perfectly well.

ART. III.—*Experimental and Clinical Researches on the Physiology and Pathology of the Spinal Cord, and some other parts of the Nervous Centres.* By Professor BROWN-SÉQUARD, M. D., of Paris.*

(Continued from p. 204.)

§ IV. *Paralysis of Sensibility in different parts of both sides of the body, produced by an alteration in only one side of the spinal cord.*

The paralytic symptoms produced by an alteration of a lateral half of the spinal cord, vary greatly according to its extent transversely and longitudinally. I do not intend to speak here of the differences which are due to the place of the alteration in a limited transversal part of the cord, i. e., either one of the white columns or the gray matter. My object now, is, merely, to examine the effects produced by an alteration of the entire thickness of a more or less extended portion of a lateral half of the cord.

To avoid complications and long explanations, in the preceding parts of this paper, I have thought better to mention only two of the paralytic effects, produced by an alteration of a lateral half of the spinal cord. Nevertheless a third one exists, which consists in a loss of sensibility on the side of the alteration and in the parts of the body which derive their sensitive nerve-fibres from the altered part of the spinal cord. If the longitudinal extent of the alteration is only that of the insertion of the roots of one of the spinal nerves, the loss of sensibility, on

* Two important corrections must be made in the part of this paper, already published: the first, page 192, line 10, *instead of* part of the Pons, *read* part of the right side of the Pons; the other, in the last part of the conclusions, letter c, p. 204, *instead of* The alteration occupying an entire lateral half, *read* The alteration occupying the entire thickness of a portion of a lateral half.

the same side of the body, is very nearly limited to the parts receiving their sensitive fibres from this nerve.†

There ought to be also a slight degree of anesthesia in parts of the body receiving their sensitive nerve-fibres from the posterior roots of the nerve or of the two nerves immediately below the alteration, on account of the fact that some fibres do not decussate at once and go upwards, a certain length, before decussating.

From what we have said it will be easy to deduce what must take place in all the cases in which alterations, able to produce paralysis, occupy the entire thickness of a part of a lateral half of the spinal cord. To render the subject clearer I think proper, nevertheless, to say a few words on three different kinds of paralysis, produced by an alteration of a lateral half of the cord and all characterized by the existence of paralysis of movement on one side of the body and a more or less extended paralysis of sensibility on the two sides of the body.

If an alteration, able to produce paralysis, exists in the whole thickness of a lateral half of the cord in the entire extent of the part from which come all the nerves going to one of the upper limbs, there will be paralysis both of movement and of sensibility in that limb, and paralysis of movement in the trunk and the inferior limb, in the same side of the body, and, besides, paralysis of sensibility in the opposite side of the body (limbs and trunk).

If an alteration, able to produce paralysis, exists in the whole thickness and length of the part of a lateral half of the cord, which gives all the nerves going to one of the inferior limbs, there will be paralysis both of movement and of sensibility in that limb and only paralysis of sensibility in the opposite limb.

If an alteration, able to produce paralysis, exists in the whole thickness and in the whole length of a lateral half of the cord, the symptoms will be a paralysis of movement, in the side of the body corresponding to the side altered in the cord, and a paralysis of sensibility in the two sides of the body (neck, trunk and the four limbs).

† I have already said that most of the sensitive nerve-fibres *appear* to make their decussation, directly after their entrance in the spinal cord, as elements of the posterior roots. This is a mere appearance and there are facts proving, as I will show hereafter, that the fibres which penetrate in the spinal cord, in each of the posterior roots, behave there like the fibres of the sensitive root of the trigeminal nerve, in the Pons Varolii. A few go upwards, some almost transversely, towards the mesial plane, and many go downwards to make their decussation below their point of introduction in the nervous centre.

As the sensitive nerve-fibres, coming from one side of the body, have to pass through the corresponding side of the spinal cord to go to the opposite side of this organ, it is easy to understand that an alteration occupying the entire thickness of the cord is able to produce a paralysis of sensibility together with a paralysis of movement, in the same side of the body. But it must be remembered that if, in such cases, the paralysis of movement exists in all the parts of the body, receiving their nerves from the altered part of the cord and also from all the healthy parts below it (if there are any), the paralysis of sensibility, in the same side, remains limited almost entirely, to the parts which receive their nerves from the altered portion of the spinal cord.

To conclude I will say that any alteration of a lateral half of the cord, occupying its entire thickness, and able to produce paralysis, will cause:

1st. A paralysis of movement in the same side and a paralysis of sensibility in the opposite side of the body,—these two paralyses having the same extent;

2d. A paralysis of sensibility in the side of the body where the alteration exists and limited to the parts receiving their sensitive nerve-fibres from the roots of the spinal nerves penetrating the cord in, or very little below, the altered portion.

§ V. *On some pathological cases and other facts which appear to be opposed to the deductions that have been drawn from the facts and reasonings contained in the four preceding sections.*

The conclusions which are to be found at the end of the third section of the first part of this paper, imply that the cerebro-spinal axis is necessary for volition and for sensibility; they imply, also, that volition and the perception of sensations are performed in the Encephalon and not in the spinal cord; besides, they, also, imply that a decussation takes place for the sensitive and voluntary motor nerve-fibres, in some parts of the cerebro-spinal axis. But there are facts opposed to all these views, and, consequently, opposed to the conclusions I have arrived at. I will try, here, to answer to the objections which might be drawn from these facts, against these conclusions, and I hope that some light will be thrown by this discussion upon some of the most important problems relative to the physiology and pathology of the nervous system.

I will examine alternately the value of the following cases, experiments and anatomico-pathological dissections.

1st. Cases in which voluntary movements and sensibility are said to have existed in children apparently deprived of encephalon and spinal cord.

2d. Cases in which, although the spinal cord appeared to be destroyed in all its thickness, voluntary movements and sensibility are said to have existed, in the parts of the body, behind the destroyed parts of the cord.

3d. Cases and experiments which appear to prove that voluntary movements and sensibility have their centre in the Pons Varolii and the Medulla Oblongata.

4th. Cases in which a considerable alteration of Pons Varoli or of the Medulla Oblongata has not produced paralysis of movement or sensibility.

5th. Cases in which an alteration existing in the two sides of the Pons Varoli appeared to have produced a paralysis only in one side of the body.

6th. Cases in which an alteration in one side of the Pons Varoli or the neighboring parts appears to have produced paralysis in both sides of the body.

7th. Cases in which an alteration in one side of the Pons Varoli or neighboring parts has produced paralysis in the same side of the body.

8th. Cases and experiments proving that there are, in different parts of the Encephalon and in the spinal cord, motor nerve-fibres which are not voluntary motor.

9th. Anatomico-pathological dissections which appear to prove that nerve-fibres coming from the spinal cord decussate not only in the Medulla Oblongata but in parts above it.

Before discussing the value of these different facts, I ought to ask, from my readers, to examine and to weigh carefully my reasonings, and I indulge the hope that, if they do so, they will adopt my conclusions, however strange and opposed to heretofore received opinions, some of these conclusions may, at first, appear to be.

1. *Alleged voluntary movements and apparent existence of sensibility in children apparently deprived of the cerebro-spinal axis.*

I think that it is now impossible to deny that there has been cases in which such monsters (*Amyelencephalous*, Béclard,) have had move-

ments, either in or out of the uterus, and without doubt purely reflex and which have been mistaken for voluntary movements and admitted as a proof that sensibility was existing. Among numerous cases collected by Isidore Geoffroy St. Hilaire* and by Ollivier d'Angers† there are some which cannot be considered as entirely erroneous statements and, to laugh at the believers in these facts, as Longet‡ does, cannot be an argument against their existence. What is to be done is, no more to deny, but to try to explain, and this, I will do, after having related some extremely curious cases, recently published and, perhaps, better authenticated than those of which Longet has spoken.

The first case I will relate is recorded in the very rich and interesting catalogue of the Boston Anatomical Museum, for which science is indebted to the zeal and activity of Prof. J. B. S. Jackson.

Case. I.—A pregnant woman did not feel the movements of her child, until about the end of the fifth month and they were always feeble and peculiar. In the last month slight motions of the child were still occasionally felt, even after a profuse discharge of liquor amnii. Labor came on and was accomplished with very little pain; the child was born *alive*, the mother having felt its motions for fifteen or twenty minutes after it was expelled. On the arrival of Dr. Hildreth, half an hour afterwards, the lower extremities of the child, were still in the vagina.

The spinal marrow was wanting and, the spinal column being open throughout, the nerves terminated in the membrane upon its posterior face. A very small bundle of nervous fibres was seen passing down over five or six of the processes upon the left side, and a few of the cranial nerves were found, among which, it was thought, was the par vagum. Nerves of the trunk and extremities well developed.

The brain existed, weighing three ounces (the weight of the monster being three pounds and one ounce). It rested upon the expanded dorsal and lumbar vertebræ and upon the integument which covered the depressed cranial bones. It was divided into two equal hemispheres and, imperfectly, into convolutions, the arachnoid membrane being continuous about the base with the common integument. The whole mass was very soft, and of a dusky color, from congestion, and effused blood; there being in each hemisphere a cavity which was filled with

* Hist. des Anomalies de l'Organisation, Vol. II. 1836.

† Loco cit. Vol. I, p. 146.

‡ Anat. et Physiol. du Syst. Nerv. 1842, Vol. I, p. 323.

coagula. No other parts of the brain were recognized, and no connection was traced between this mass and any of the nerves, either cerebral or spinal.*

It is to be regretted that some circumstances have not been pointed out, in this case, and, for instance, the size of the ganglions of the sympathetic and of the spinal nerves.

The movements of the child, after birth, not having been ascertained by the physician himself, we cannot know whether they were respiratory, convulsive or reflex. As to what took place before birth, if we can rely upon the assertion of the mother there has been movements, but they began late, although much sooner than these uterine contractions which are sometimes mistaken for movements of the child. The mother had had already two children and, therefore was able to distinguish the movements of a child.

I must say also that, in a physiological point of view, although the brain was existing in this monster, it is exactly as if it had been missing because it was not connected with the nerves.

In the following case we will find that movements have existed, during pregnancy, in a case, the circumstances of which, may lead us to explain how movements may exist.

Case II.—A woman, pregnant for the sixth time, was not aware of the fact, although her abdomen had become large and her menstruation had stopped, and she was much surprised when she felt the movements of her child, which were so strong that, even the hand of another person could perceive them. The 8th of May, she felt the movements for the last time and after the expulsion of a very considerable quantity of water, she was delivered of a child, who, out of the uterus, remained motionless. Its weight was from 3 to 3½ lbs. It had no neck and the head, very small, appeared to be lodged in a cavity in the trunk. From the upper part of the orbitary arcads the skin was missing all over the head. The spinal canal, open all along, from the cranium to the lumbar region, contained a spinal cord, being in shape like a band, flattened from behind forwards and of about one line and a half in thickness; its beginning at the base of the cranium was somewhat bifurcated and evenly cut. It was lying on a fatty and fibrous

* A Descriptive catalogue of the Anatomical Museum of the Boston Society for Medical Improvement. By J. B. S. Jackson. 1847, p. 263. (Case by Dr. Charles T. Hildreth.)

mass, which filled a deep excavation, found in the place where the neck should have been, had it existed. This medullary band is very loosely attached to the spinal canal, by some fibrous filaments. This band had no connection with the nerves, which terminated in the vertebral foramina by a swollen and ganglionary extremity. In the trunk and limbs, the nerves were well developed. There was no brain.

The chest was large; no respiration had taken place, as the lungs showed. The upper part of the cranium was missing and the basis was convex.

It is very much to be regretted that Dr. Olier,* to whom we owe the relation of this interesting case, has not given more details about the nervous system. He does not speak either of the cranial nerves or of the sympathetic.

I have now to examine the value of the two cases I have related and of many other analogous to them, which are more or less authenticated.

The first question is whether there has been any decided voluntary movement and any perception of a sensitive impression in these monsters.

Nothing proves that sensibility exists, and the movements consecutive to an excitation, however regular or co-ordinate they may be, cannot give such a proof. Nothing, in these circumstances proves that these movements are not reflex. It is now generally admitted, as Bischoff,† Dr. Simpson‡ and others have established, that the movements of healthy children in the uterus, and even for sometime after birth, are merely reflex. If it is so for them, *a fortiori*, is it so for the *Amyelencephalous* or *Pseudencephale* monsters. These reasons against the existence of sensibility may be employed against that of a Will, in these monsters. Their movements are almost always consecutive to an external excitation. Nevertheless we admit that they have, sometimes, an *apparently* spontaneous movement; but, we well know that reflex movements may be excited by any irritation of the viscera and that the respiratory movements of the chest may excite reflex movements, in the limbs. Besides, the same excitation which produces respiratory

* Observ. d'un fœtus Anencéphale, in Comptes Rendus de la Soc. de Biologie, 1850, Vol. II, p. 106.

† Traité du développment de l'homme.—Trad^on^ françoise, 1843, p. 459.

‡ Edinb. Monthly Journal of Med. Science, July 1849.

movements, is able to produce movements in the limbs. I have tried to prove in a book*, which I published two years ago, that the nerves, muscles and some other parts of the body, may be excited to act, by blood, containing a great quantity of carbonic acid. Very likely, respiratory movements, in monsters, as well as in healthy children and adults, take place in consequence of an excitation produced by carbonic acid, and an excitation, by this agent, may also be the cause of some of the falsely called voluntary movements in the Pseudencephalic monsters.†

To conclude we will say that, if there appears to be no doubt that movements may exist in these monsters, nothing proves that they are voluntary and that they result from true sensations. On the contrary they appear to be purely reflex or mere excited movements.

A second question now arises, much more difficult to be solved than the preceding. How to explain reflex movements, if there is no spinal cord or if this organ, though existing, is not united with the nerves?

Let us examine alternately the different possible explanations.

1st. A man of genius, Etienne Geoffroy St. Hilaire‡ has given credit to the idea that the liquid which is sometimes found in the Pseudencephalic monsters, in the cranio-spinal cavity, and filling there a tube, formed by the meninges,—may be considered as containing the elements of the brain and spinal cord, in their primitive state of development. In many cases this liquid is not found in the membranous tube formed by the meninges, but then, it appears to have gone out, together with the liquor amnii, before parturition.

This theory is quite opposed to the well known doctrine of Morgagni,§ who admitted that the production of the liquid, found in, or coming from the cranio-vertebral cavity, is the result of a morbid ac-

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* Experimental researches applied to Physiol. and Pathol. New York, 1853, p. 101-113.

† The Pseudencephalic monsters compose the Genus *Pseudencéphale* of the family of the *Pseudencéphaliens* of E. G. St. Hiliare. They correspond to the *Amyélencéphales* of Béclard. The characters of the Genus are to have the spinal canal open and no spinal cord, and, besides (as family characters), no true encephalon and, in its place, a vascular tumour, which may contain some nervous matter.

‡ Philosophie anatomique.—Des Monstruosités humaines, 1822, Vol. I, p. 125-153.

§ De sedibus et causis Morborum. Epist. 12.

tion, and that a true dropsy is the cause of the destruction of the nervous centres.

Of these two opinions, if we adopt the first, as regards the source and the nature of the liquid, we cannot, nevertheless, adopt entirely the view of E. G. St. Hilaire, that this liquid may act as the brain and spinal cord would. We know that as long as the nervous centres are in a liquid state, in the human embryo, there are no movements, and I have ascertained that this does not result from an insufficiency in the development of muscles. In embryos of rabbits, from eight to twelve days old, I have found the muscles irritable and producing movements when directly excited, and their nervous centres, then almost entirely liquid, appeared not to be endowed with any power of action. But it may be that the liquid we find in the vertebral canal of monsters, contains a sufficient number of soft nerve-fibres and cells, to produce some reflex movements. Micrographers, and they alone, may solve the question of the existence of these nervous elements in this liquid.

If we admit as true the doctrine of Morgagni, it belongs still more to micrographers to point out what nervous elements are left in the cases where the naked eye shows only a liquid.

2d. A second explanation might prove good for a number of cases, and especially those like the one of Dr. Olier, which I have related. A rudiment of the spinal cord there exists, but is not found united with the nerves. For who knows, how easily in fœtuses, healthy or not, the roots of the spinal nerves, may become separated from the spinal cord and also from the ganglions and, besides, may break in any part of their length, particularly when there is an unusual amount of water around them,—it will be easy to understand that, in Monsters, the roots of the nerves may not have not been found, although they may have existed. It is known that a very able Anatomist, Desmoulins, having vainly searched for the roots of the spinal nerves, in fishes, concluded that they do not exist and that the nerves, in these animals, are attached to the meninges. Desmoulins has been greatly mistaken, and if he has been so, in such circumstances, it will easily be admitted that others, not so accustomed as he was to dissections, may commit the same error, in circumstances more favorable to a mistake.

In experiments, that I have performed on Birds and other animals, I have found that reflex actions may exist after considerable alterations of the spinal cord. I will hereafter give the details of some of these facts and of some others proving that, not only, then, reflex actions

may exist, but also sensations and voluntary movements. We can, therefore, understand that a small stripe of the spinal cord, as in the case of Dr. Olier, if it is connected with the nerves, may be the cause of the reflex movements, existing in the Pseudencephalic.

3d. We are led to propose a third explanation, based upon some anatomical facts, observed in Amyelencephalians, and also upon the experiments we have just spoken of, and which prove that small parts or stripes of the spinal cord may be sufficient for reflex actions.

In some cases of Anencephalia or of Pseudencephalia, the roots of the nerves have been found hanging, apparently, as loose threads in the cranial and spinal cavity. In cases of this kind, reported by Dr. Lonsdale* and Prof. Paget,† it has been found that the nerve-fibres formed loops, imbedded in a filamentous tissue and surrounded by numerous granules. It is probable, and it is considered to be so by Prof. Paget, that this granular matter may be regarded as gray matter, in an early stage of development.

I am not prepared to say that these loops and this slightly developed gray matter are capable of producing reflex movements, strong enough to be observed, but I think that they may assist other parts in the production of these movements.

An amount of gray matter, much greater than that found by Drs. Lonsdale and Paget, may certainly have existed, in cases of *Amyelencephalia*, and no notice taken of it, by Physicians who were not prepared to consider it as nervous matter. And this amount of gray matter, connected with the roots of the nerves, may have been able to produce reflex movements.‡

The possibility of existence of reflex movements when the spinal cord is reduced to only a part of its substance, is well proved by the following experiments. Two pigeons had had their spinal cord divided

* Edinb. Med. and Surg. Journal, January '44.

† Brit. and For. Med. Rev. No. 48, p. 273.

‡ It is very much to be regretted that the recorders of the cases numbered 776, 778, 781, in the *Catalogue of the Boston Museum*, have not said if the mothers of the monsters they describe, had felt them move, during the last days of pregnancy. As regards the case No. 776, p. 254, the writer says: "A trace of brain only existed, if any at all, but in the situation of the pituitary gland, there was found a soft, rounded, reddish mass; and there was some appearance, also, of a thin and superficial layer of medullary substance in place of the spinal marrow; and the same has been sometimes observed in other similar cases; spinal nerves and ganglia well developed, as they usually are in these cases."

transversely, at about the middle of its length. A metallic wire was passed in the spinal canal and pushed, from the place where the cord had been cut, until the level of the second or third caudal vertebra. In one of these animals, there has been, a short time after the operation, weak but positive reflex movements, in the tail and the posterior limbs, whatever was the excited point. For many days and until the time when this animal was killed, reflex action lasted. The dissection of the animal was made, at a meeting of the Society of Biology,* and all the posterior surface of the cord was found covered with coagulated blood; the cord was flattened from behind forwards, softened in all its thickness, and it had, in many places a violet, reddish color, without doubt, due to infiltrations of blood. This half liquid gray matter which, in birds, exists in the rhomboïdal ventricle, was destroyed,† and the posterior columns of the cord were, almost everywhere, separated one from the other, so that the central gray matter was laid bare.

In the other pigeon there were evident, but weak, reflex movements, only in the left posterior limb and in the tail; excitations of the skin of the right posterior limb were absolutely without effect. Dissection being made, in presence of the Society of Biology, it was found that, in a great length, the right side of the spinal cord had been entirely destroyed, and that the other half, which existed, was red and softened, and in communication with the roots of the nerves and with the caudal part of the cord, which was but little altered.

I have performed other experiments of the same kind, on some mammals, and succeeded in obtaining like results, particularly on very young ones. Newly-born cats are the best animals for such experiments. Before my researches, experiments of this kind, had been made, but only on frogs and other cold-blooded animals, by Volkmann, Van Deen and Stilling.

The resemblance between what takes place in the animals, I have experimented upon, and what exists in monsters, extends farther than the coexistence in both, of reflex movements and of a small amount of nervous matter, in the spinal canal. I have found‡ that, in animals, having had a part of their spinal cord crushed, there were, besides re-

* See Comptes Rendus, Vol. II, 1850, p. 47.

† I have already published, five years ago, a very curious fact about this gray matter: it is that when it is taken away, a reproduction of a similar substance takes sometimes place in a very short time.

‡ See Comptes Rendus de la Soc. de Biologie, Vol. III, 1851, p. 15.

flex movements, convulsions, and, in certain muscles, contractures producing deviations of different parts of the limbs. So that, I had there, under my eyes, the phenomena which exist in the production of deviations, in the limbs of monsters, according to the theory of Dr. Jules Guérin.

4th. The last explanation I will propose, is founded on the fact that the ganglia of the spinal nerves and those of the sympathetic are generally much developed, in monsters deprived of a great part or of the whole of their cerebro-spinal axis, as Breschet, Lallemand‡ and others have pointed out.

In the case of Dr. Olier, above reported, we see that the spinal nerves had, in the vertebral foramina, a swollen and ganglionary extremity. In a very interesting case of Acephalia, recorded by Prof. O. W. Holmes,§ although the spinal marrow existed, the ganglia of the sympathetic nerve, and the filaments connecting them, were unusually developed in the thorax, abdomen and pelvis; in the thorax were two ganglia, which extended from the upper rib to about the eighth rib upon the right side and to the sixth on the left. In this case the two upper limbs and the head were missing.

The increase in size of the ganglia in these monsters, may easily be explained. The blood, containing the chemical elements, which are to be used in the formation of the nervous tissues, their deposition ought to take place, in the only parts of the nervous system which exist, and, the less there are of such parts, the greater, as a general rule, ought to be the accumulation of nervous matter in them.

It is to be regretted that in cases where the spinal cord was missing, and the ganglia of the sympathetic nerve were enlarged, it has not been examined if the branches of communication between the motor and sensitive spinal nerves, were not larger than usual. The importance of such an examination becomes evident if we suppose a case of *Amyelencephalia*, in which it would be positive: 1st. that there has been recently more or less reflex movements; 2d. that there is no trace whatever of the encephalon and of the spinal cord.

Then, we have either to give up all the teachings of daily experimentation and observation, about the necessity of nervous centres for the production of movements, after an excitation of the skin or of another surface,—or to look upon the ganglia of the spinal nerves or of the sympathetic, or of both, as the nervous centres which, by their

‡ Observ. pathol. propres à éclairer plusiers points de Physiol. 1818, p. 30.

§ Catalogue Boston Museum, p. 245.

reaction, originate these movements. At first, we already know that these ganglia are larger than usual; but to admit the hypothesis to which we are forcibly led, some other things must exist. If the ganglia of the sympathetic alone are enlarged and are endowed with reflex power over the muscles of the limbs and trunk, of course, the nerves of these parts must be connected by many more nerve-tubes than usual, with these ganglia. In other words the origin of the excito and reflecto-motor nerve-fibres of the limbs and trunk must be in these ganglia, instead of being, as normally, in the spinal cord. This implies, not only that the branches of communication, between the spinal nerves and the ganglia of the sympathetic, must be larger than usual, but, also, that the fibres come from the periphery of the spinal nerves into the branches of communication. If, instead of being in the ganglia of the sympathetic, the enlargement is in those of the spinal nerves, then the fibres of the motor roots, instead of merely passing along the ganglia, will penetrate them, and be connected there with the cells of the gray matter and with the excito-motor fibres, as, normally, in the spinal cord.

The four explanations or rather the four hypotheses, which I have exposed and by which, I believe, that we may understand how are produced the reflex movements, in Monsters, apparently deprived of the cerebro-spinal axis, may be solved by future examination. My object in relating these hypotheses was double; it was, 1st to show, that there is possibility of explaining the movements of these monsters, so that we are not compelled to admit that our general ideas, about the physiology of the nervous system, are not grounded; 2d, to call the attention of future observers to what they will have to examine in *Amyelencephalous* monsters, and to the causes of fallacies, in making such an examination. And, in view of this second object, I will sum up, here, what, I think, ought to be searched in such cases.

1st. The composition, chemical and microscopical, of the liquid, contained in or coming from the tube formed by the meninges, to ascertain the degree of analogy, between this liquid and the nervous tissues, in an early period of development.

2d. The existence or absence of small masses of granular matter, connected one with another and connected, also, with the spinal and cranial nerves. Of course the nature of the granular matter must also be determined.

3d. The existence of communications between the nerves and a more or less developed stripe of spinal cord; and, about this, it must be re-

membered that the nerves are so soft, so fragile that they may be very easily separated from the spinal cord, as it may have been, in one of the two monsters the case of which is above described.

4th. The enlargements of the ganglia of the spinal nerves and of those of the sympathetic and all what relates to the communication of these ganglia with the nerve-fibres coming from or going to the trunk and limbs, must be examined carefully.

There are some important facts relative to the Pseudencephalic monsters, of which I must say here a few words.

As far as examination with the naked eye goes, it seems that the development of muscles and nerves in these monsters, born at full term, is, almost always, as perfect as in the most healthy newly-born children.* The fact that muscles are well developed, proves that they have been put in action, and as they can, hardly, have been acting, without having been excited by nerves, it follows that the nerves must have been able to act, at least, until a short time before the monster is expelled from the uterus. And as the nerves do not act spontaneously, but after an excitation, and, besides, as there is no known sufficient cause of direct excitation of the reflecto-motor nerves, it results that the action of these nerves is a secondary one, produced by a reflex action from a nervous centre, itself excited, in consequence of an irritation of some excito-motor nerves, in the skin or in the mucous membranes.

This series of deductions being right, it may fairly be concluded that even in cases where it is not known if a mother has felt the movements of her child, monstrous or not, it is probable that it has had reflex movements, if its muscles are well developed. In cases of monsters, in which the nerves have not been able to act on the muscles, either because there are no nervous centres at all, able to put them in action, by their reflex power, or because the nerves have not had their natural development, the muscles do not develop themselves, or if they have had a beginning of development, they become atrophied and changed into fibrous or fatty

* The theory of Tiedemann (Zeitschrift fuer Physiol., Vol. I, p. 56, Vol. III, p. 1,) that the nervous system is necessary to the development of the embryo is certainly not more exact than the analogous theory, according to which the nervous system is necessary to secretion and nutrition, in children and adults. As I have tried to show elsewhere (Exp. researches applied to Physiol. and Pathol. New York, 1853, p. 6-17), the numerous facts, which establish that the nervous system may have a great influence on nutrition and secretions, do not prove that this influence is necessary and there are many other facts proving, on the contrary, that these functions may exist, without any intervention of the nervous system. Against the views of Tiedemann, see *Bischoff, loco cit.* p. 468.

tissue, according to circumstances, which an eminent physician, Dr. Jules Guérin, has pointed out.

Alessandrini,* has described two monsters, in which the inferior part of the spinal cord and its nerves were insufficiently developed, and the muscles of the posterior limbs were missing, although the blood-vessels, bones, and other parts, partly existed. In cases of absence, not only of the nervous centres, but also of the nerves, such as have been recorded by Clarke† and by Hempel,‡ the muscles had hardly any existence.

As a conclusion to all that we have exposed about the Amyelencephalous or Pseudencephalic monsters, we will say that their movements appear to be merely reflex and that, although they are deprived of the greatest part of their nervous centres, there is, according to the greatest probability, enough of these parts remaining to produce reflex actions.

Therefore, it cannot be concluded, from the facts observed in monsters, that the encephalon is not necessary for the perception of sensitive impressions and for the production of voluntary movements.

2. *Alleged voluntary movements and apparent existence of sensibility, in parts of the body, considered as deprived of their natural connection with the encephalon.*

As I propose to treat this subject at length, in a special paper, I will merely say here: 1st. That the cases of softening of the spinal cord, related by Velpeau,§ Ollivier d'Angers and Abercrombie, in which no paralysis has existed, although there appeared to be an interruption of continuity, between the nerve-fibres of some parts of the body and the encephalon, are not fit to prove that this continuity is not necessary. Until it is demonstrated that the nerve-fibres and the cells of the cord lose their properties when they are softened, these facts will prove nothing against the necessity of the continuity of nerve-fibres, for sensation and for volition. But, it will be said that there are cases, where the softening was so considerable that the membranes of the cord contained only a liquid, which flowed out, when the membranes were opened. This also has no value: where is the proof that it was so during life? Is there any physician, knowing the facts,

* Novi Comment Scienc. Instit. Bonon, Vol. III, 1837.

† Philos. Trans. 1793.

‡ De monstris Acephalis, Hafniæ, 1850, p. 38 and Tabulæ 5 and 6.

§ Archives gén. de Médec. Vol. VII.—1825.

published by Calmeil,|| and which demonstrate the extremely great rapidity of production of softening, which may take place in the spinal cord, a short time before or after death, and who will maintain that the liquefaction of the cord had existed previous to death, without causing paralysis?

2d. As to the cases of induration of the spinal cord, the same thing may be said as for cases of softening. Until it is shown that in cases of induration, in which voluntary movements and sensibility have continued to exist, there was an impossibility for the spinal cord to perform its functions, these cases will merely prove that the functions of this organ, may remain, although its organization appears to be much changed.

3d. We will show elsewhere that the same reasoning may be applied to the cases in which the transmission of nervous action from or towards the brain apparently continued to take place, in the spinal cord, although it was much atrophied, in consequence of a compression or any other cause.

4th. There are cases in which it is said that the spinal cord had been, partly or entirely, cut across, and in which there was no paralysis of sensibility or voluntary movement. But in these cases, the section had taken place near the lower extremity of the spinal cord, as in the case so often spoken of, recorded by Desault,‡ so that almost all the nerves had their origin above the section. Besides, when a sword has been introduced into the spinal cord, as in a curious case, related by Ollivier d'Angers§ we may understand that few of the fibres of the cord had been cut by the thin extremity of the sword.

We, therefore, will conclude that the facts of softening, induration, atrophy or division of the spinal cord, cannot prove against the necessity of a communication of the encephalon with the different parts of the body, through the spinal cord, for the existence of voluntary movements and sensibility.

3. *Alleged persistance of sensibility and voluntary movements in men and animals, deprived of all the parts of the encephalon, except the medulla oblongata and the Pons Varolii.*

The facts upon which Physiologists and Pathologists have grounded their opinion that the upper parts of the encephalon are not necessary

|| Journal des Progrès des Sciences Médic. 1828, Vol. XII, p. 172.
‡ Journal de Chirurgie. Vol. IV. p. 137.
§ Loco cit. Vol. I. p. 354.

for volition and for the perception of sensations are of two kinds: some are experimental, some clinical.

As to the experimental facts, they consist in showing that after the removal of the encephalon, except the Pons Varolii and Medulla Oblongata, the animals manifest that they feel pain by their cries and agitation. When, says Longet,* rabbits and dogs have been submitted to this mutilation, upon their encephalon, although they seem to be in a deep coma, they are still able to agitate themselves and to cry plaintively, under the influence of strong external irritations; but, if a sufficiently deep alteration is made, in the Pons Varolii, there is an immediate cessation of the cries and of the agitation; it merely remains an animal, in whom circulation, respiration and other nutritive functions are momentarily accomplished.

Longet concludes, from his experiments, that the Pons Varolii is the *seat of general sensibility* (faculty of feeling pain, etc.,) and *the centre for the perception of tactile impressions.*† Of these two deductions the second has no foundation whatever; there is not a single fact which may even appear to lead to it. As to the first deduction, if Lorry, Magendie, Desmoulins, Bouillaud, Gerdy, Serres, J. Mueller, have concluded, as Longet did, after them, that the existence of cries and of agitation, in animals, deprived of all their encephalon, except the Pons Varolii and the Medulla Oblongata, proves that the general sensibility then exists,—this merely shows that these eminent physiologists did not know how powerful may be the reflex power.‡ Of the two facts given as proofs of a perception of sensation, *i. e.* agitation and cries, the first, certainly, cannot prove that there has been a perception of pain. It is exactly the same thing that we see in limbs, connected by their nerves, with a part of the spinal cord, separated from the encephalon. If, in this case, we call the agitation a reflex action, why shall we give to it another name, in the case where the the spinal cord is connected with the Medulla Oblongata and the Pons? The agitation, it will be said, is greater in this last case, but the

* Traité de Physiol. 1850, Vol. II, B. p. 38.

† These are his own words, loco cit. p. 36 to 41.

‡ It may seem strange that I declare that Prof. J. Mueller, who has in common with Marshall Hall, the glory of having called the attention of Physiologists and Physicians, to the phenomena of reflex action, does not, nevertheless, know, how great may be, the power of the reflex faculty. But, to prove that I am right, I think it is sufficient to say that Prof. Mueller, at the time he published his view on the Pons Varolii, admitted that reflex action is greater in cold blooded than in warm blooded animals, and also that he was not aware how much pure reflex movements may be harmonious and well co-ordinated.

extent of the nervous centre, able to produce reflex movements, is greater, so that these movements must be stronger and more extensive.

Now, as to the cries, we may also consider them as mere results of reflex contractions, taking place in certain muscles. The vocal cords, becoming fixedly stretched, and the expiratory muscles contracting strongly and suddenly, the column of air expelled from the chest, passes along the stretched vocal cords and vibrations take place, producing the sounds we call cries. I have seen two hysteric patients who cried suddenly (although they tried not to do it), after the slightest irritation of the skin or after any kind of emotion.‡ It seems, then, that cries may be considered as mere results of reflex contractions. I must, nevertheless, say that I do not think that the question is positively decided. My only object now is to show that cries cannot prove that sensibility exists, because we may explain them, without admitting that pain has been truly felt.

All the writers on this subject, already named, had considered the Pons Varolii as being the organ in which the perception of sensitive impressions take place, and they agree in saying that, after the removal of the Pons, there are no more cries. They have been mistaken about this last fact, and I have obtained quite a different result, in performing this experiment on cats, rabbits and Guinea-pigs. After having removed, by slices, the whole encephalon, except only the Medulla Oblongata, I have observed that the animal, when pinched, is much agitated, and that it cries plaintively. Then, if the Medulla Oblongata is removed, there are no more cries, when the animal is pinched, but

‡ Dr. R. B. Todd has given some good reasons to show that the Pons Varolii is the centre for emotional movements (Cyclop. of Anat. and Physiol. Vol. III, p. 722, q.) I am ready to admit that the Pons Varolii, particularly by its part connected with the roots of the auditive nerve, is a portion of the centre of emotional movements, but not the seat of the whole of this centre. The Medulla Oblongata, I think, is also a part of this centre. When a violent and sudden emotion causes death, it is in acting on the Medulla Oblongata, that it has such a powerful effect. An excitation is then produced on the roots of the *par vagum*, which appear to have their true origin in the neighborhood of the nib of the *Calamus Scriptorius*, and in consequence, the blood-vessels of the heart contract and expel the blood they contained and with it, the natural excitant which causes the movements of the heart. So that a complete syncope and death take place. It is in acting on the branches of the par vagum, in the lungs, as I will prove elsewhere, or on the Medulla Oblongata, that chloroform, sometimes, kill suddenly. The stopping of the heart's action in the celebrated experiment of the brothers Weber, take place in the same way, as I have tried to prove in my *Exp. researches*, p. 77, and p. 101 to 124.

the agitation continues.* There is great appearance that, after this mutilation, cries would exist if the motor nerves of the larynx, instead of being connected with the Medulla Oblongata, were connected with the spinal cord. Of the two things necessary for cries, one exists: the animal, being pinched, not only has agitation of the limbs and trunk, but a contraction of the expiratory muscles. Flourens† had already seen that there may be a respiratory movement, in such cases, and he says that a true inspiration, producing a sound in the larynx, exists when the animal is pinched.

Now we will conclude that, if cries prove that there is perception of pain, we must admit, in opposition to all the Physiologists already named, that the Medulla Oblongata is a centre for that kind of perception. Besides, the view of these Physiologists, as regards the Pons Varolii, is erroneous. Still more, if agitation proves that sensibility exists, the spinal cord possesses this faculty, as well as the encephalon. But we repeat that the reflex theory explains the existence of agitation and of cries, and we are not therefore compelled to admit that the spinal cord and the Medulla Oblongata possess sensibility.

The *will*, or, at least, the faculty, under the influence of the will, and by which the so-called voluntary movements are produced, is considered, also, by Gerdy, Mueller, Longet and others, as having its organ in the Pons Varolii and in the Brain. The reasons given by these writers to prove their views are far from being satisfactory. They prove merely that there are energetic movements after an excitation of the animal, and these appear, then, to be mere reflex movements. Longet himself (loco cit. p. 39) says, that if the cerebral hemispheres have been removed, and also the corpora striata, in rabbits, they can stand up or move forwards, but that after the removal of the thalami optici, although the Pons Varolii is left entire, there is no more possibility for the animal to walk or to stand up.

I have many times repeated these experiments upon rabbits and Guinea-pigs, and uniformly obtained nearly the same results, which, certainly, are a deadly blow to the theory advocated by Longet. Not only standing and walking become impossible after the removal of the whole encephalon, except the Pons and the Medulla Oblongata, but it

* These experiments I had already published, in the Comptes rendus de l'Acad. des Sciences. 1849. Vol. xxix. p. 672.

† Rech. expér. sur les Propr. et les Fonct. du syst. Nerveux. 2d ed. 1842, p. 178.

seems, also, that the apparently spontaneous movements which sometimes exist there, are mere convulsive movements.

Besides, I have found that the reflex movements, in this case, are only a little stronger than in animals deprived of the Pons Varolii. As to the regularity, the harmony, the direction of the reflex movements, they are alike in both cases.

The celebrated doctrine of Flourens, against which Bouillaud, Gerdy, Longet and others had proposed the theory, which I have just proved to be erroneous, does not appear to be right. Flourens has gone too far, I believe, in thinking that the faculty of perception for all the sensitive and the sensorial impressions, exists only in the cerebral lobes, and that the same parts are also the only seat of Intelligence and Volition. We will not discuss these questions here, but, we will say, as regards the perception of sensitive impressions and Volition, that experiments on animals, as well as pathological facts, observed in man, and also microscopic anatomy, agree in showing that the thalami optici and the corpora striata, and also the crura cerebri, appear to be the centres for these actions. I am glad to agree almost entirely with Dr. Todd, as regards the corpora striata, which he considers as the principal centres for voluntary movements. But I do not agree with him as to the thalami optici, which, according to his views, are the centres for almost all the sensitive and sensorial nerves. Anatomy and Pathology are opposed to this view, as I will try to show, in a special paper.

There are, on record, many cases of Acephalia or of Anencephalia, which might be considered as proving that sensibility and voluntary movements may exist, when the whole encephalon is missing, except the medulla oblongata alone or with the Pons Varolii. In all the cases of this kind which I have collected, I have found no evidence that the movements, which existed, were voluntary and not simply reflex or convulsive. I will give here a short analysis of two, among these cases, which appear to be the most favorable to the theory I reject.

Case I.—I have seen, says Lallemand,* an encephalous fœtus, born at full time, and which lived three days. During all this time, it cried with a certain degree of strength, and tried to suck whenever anything was put between its lips. It made movements, to some extent, with its legs and arms. When anything was put in its hands, there was a flexion of its fingers, as though it would seize it, but, generally, all its

* Loco cit., p. 52.

movements were less energetic than those of a healthy fœtus of the same age.

The cerebrum and the cerebellum were entirely missing; there were, only, on the basis of the cranium, the Medulla Oblongata and the Pons Varolii, with the origin of the pneumo-gastric, trigeminal and optic nerves.*

Although Lallemand concludes from this fact that sensibility and voluntary movements existed, in this monster, no one, acquainted with reflex action, will accept these deductions.

Case II.—A fœtus, nine months old, was born perfectly well developed, except that it was anencephalous. Its eyes were constantly shut; it frequently uttered cries, that ceased when a finger was put in its mouth; it, then, sucked repeatedly.† Its limbs were agitated, with some strength, and it pressed with its fingers the things that were placed in its hands. Three hours after birth, the number of respirations, in a given time, was diminished, and the cries were less frequent and less strong. Respiration diminished gradually and became convulsive. This state lasted for six or eight hours, during which, the cries became weaker and weaker and less frequent as, also, the respiratory movements which were accompanied with general convulsions, and, at last, it died in a true state of asphyxia. The cerebrum and the cerebellum were entirely missing, and of the basis of the encephalon, nothing existed, except a very irregular medulla oblongata, connected with a kind of Pons Varolii, merely consisting in a square layer of grey matter only two lines and a half long and two lines broad. The membranes of the spinal cord were inflamed.

This case, recorded by Ollivier d'Angers,‡ and considered, by him,

* Lallemand, in this description, has not shown the accuracy which, ordinarily, characterizes his publications. He says, that the optic nerves had their origin in the parts that remained of the encephalon; this implies, certainly, that some parts, at least, of the tubercula quadrigemina were also existing, although he does not mention it.

† Sucking, in Anencephalic monsters, may take place, as it takes place, also, in animals, deprived of almost all their encephalon. This fact has been well proved by the experiments of Grainger, (Observ. on the struct. and funct. of the spinal cord. 1837, p. 80,) of J. Reid, (Physiol. Anat. and Pathol. researches. 1848, p. 183,) and by my own, (Exp. res. applied to Physiol., etc. 1853, p. 5.) Grainger has also well proved that sucking is a mere reflex action, by pointing out what takes place in the fœtus of the opossum, in which sensation and volition cannot exist, and the lips of which remain attached to the nipple by contraction and grasping.

‡ Loco cit., Vol. I. p. 179.

as proving that the spinal cord and the Medulla Oblongata possess the two faculties of perception of sensitive impressions and of volition, certainly cannot prove such things. Had Ollivier known reflex action, he would have considered this case quite in another light. But there is something important proved by this fact, and which is entirely opposed to the view of Gerdy, Mueller, Longet and others: it is that the Pons Varolii was so slightly developed, that we can consider it as missing, and, nevertheless, agitation and cries have existed as when the Pons exist. If these phenomena prove that sensibility and volition exist, we must then admit that the Pons Varolii and the cerebrum are not the only centres for volition and for perception of sensitive impressions.

To conclude, we will say that both monsters and animals experimented upon, may cry and have movements, when they are deprived of almost all their encephalon (the medulla oblongata alone remaining), but that nothing proves that these movements and these cries are not mere reflex actions.

In other words, the facts, which have been considered, by almost all the French Physiologists of our day, as proving that the Pons Varolii is a centre for volition and sensibility, cannot prove such a thing. Besides, it is clear, also, that these facts cannot prove anything against the theory that, in men and animals, having their nervous centres well developed, transmission, for both sensations and volitions, has to take place through the Medulla Oblongata and the Pons Varolii.

4. *On cases proving that considerable alterations of the Pons Varolii and Medulla Oblongata may exist without producing paralysis either of sensibility or of voluntary movements.*

We have collected a large number of such cases, mostly relative to the Medulla Oblongata. It is strange that this nervous centre, which is considered so much more important than any other, is, so frequently, and, sometimes, so much altered, without producing either death or even a decided paralysis.†

† The doctrine, now admitted by all Physiologists, as regards the existence, in the Medulla Oblongata, of a small quantity of nervous matter, endowed with the faculty of producing the respiratory movements, is not correct. I have already tried, in the inaugural dissertation of one my pupils, Dr. Benjamin Coste (*Rech. et Observ. sur le role de l'encéphale dans la respiration.* Paris, 1851), to prove that other parts of the nervous centres, besides the Medulla Oblongata, are employed in the production of respiratory movements. I intend to publish, soon, a paper, in which I will

It is strange, also, that slow alterations of the Pons Varolii, which is considered notably less useful, than the preceding organ, produce much more frequently a paralysis, and, this even, when these alterations are much less considerable than alterations of the Medulla Oblongata, which do not produce paralysis.

I need not say that very rapid or sudden alterations, kill more quickly when developed in the Medulla Oblongata than in the Pons Varolii.

I will relate, here, as specimens, some few cases of alteration of both these organs, to show how far such alterations may go, without producing paralysis.

Case I.—A patient had had,—only during the last days of her life,—all the symptoms of a cerebral compression, such as suspension of intelligence, stertorous respiration, sometimes deep groaning, slight spasms and involuntary movements.

There was no alteration of the brain and cerebellum. The volume of the Pons Varolii was almost doubled. It contained an encysted tubercle, with a smooth surface, not adhering to the nervous matter. The size of the cyst was that of a big walnut. A part of the tubercle was dense and lardaceous, the centre was softer.*

Case II.—A man, aged 63, died of acute pneumonia. He had been epileptic for 12 years; each fit began with very violent hiccups, lasting one or two minutes, and accompanied with a sensation of a ball going up from the stomach to the pharynx. All the liquids, that were then given to him, were violently expelled. To this state succeeded a loss of consciousness, which lasted two or three minutes, and then all the accidents passed away. This convulsive and momentary spasm used to come every 15 days, and some physicians had considered it as very different from epilepsy. During the fits the loss of sensibility was complete.

try to show: 1st. That almost all the parts of the cerebro-spinal axis, have a share in the production of respiratory movements; 2d. That there is no part absolutely necessary for the production of these movements; 3d. That, even in some warm blooded animals, respiratory movements, *i. e.*, inspiration and expiration, may take place after decapitation, which removes the whole Medulla Oblongata, together with the remainder of the encephalon.

* Traité de la maladie scrofuleuse, par Lepelletier, p. 129.

The brain and the cerebellum were normal; but, in the middle of the substance of the medulla oblongata, two tubercles were found: one as large as a small walnut, and the other the size of a filbert, they were adhering to each other, and each of them was in a very thin cyst. The medullary substance around them was not altered.†

These two cases show that, although there is a diminution in the number of fibres, which establish a communication between the spinal cord and the parts of the encephalon anterior to the medulla oblongata and to the Pons Varolii, sensibility and voluntary movements may continue to exist, at least until a short time before death. We are led by the fact that there is a number of fibres which are then destroyed in a part of their length, to admit one of the two following opinions.

1st. The nerve-fibres of the Pons and the medulla oblongata are not necessary channels of communication, between the spinal cord and the parts of the encephalon anterior to the Pons. I cannot admit such an opinion. It overthrows almost all that is taught by physiology and pathology, as regards the nervous centres.

2d. We can explain the facts by another hypothesis. Suppose that the divided extremities of the destroyed fibres, become connected with either the tails or the envelope of some caudate or bipolar cells, and that by the means of the fibres, originating from these cells, communication may continue, from below upwards and from above downwards. If such a reunion takes place, between the extremities of divided fibres, below and above the seat of the compression or of the alteration, although there is no decided paralysis, there must be much inaccuracy in the action of the will on the muscles, because certain muscles must be put in action at a time where the will does not wish for their contraction. As to sensations, if their intensity is not diminished, there must be a diminution in the faculty of determining from where an impression comes. These two kinds of changes, in voluntary movements and in sensibility, are very frequent in incipient paralysis, whatever may be the seat, in the encephalon, of the alteration which causes it. Very likely these changes are produced by the same anatomical causes, whatever is the seat of the disease.

It may be said that when a tumour presses upon a nervous centre, it may not destroy the fibres and merely separate them one from the other and render them thinner. This certainly ought to take place;

† This case was recorded by Gendrin. See *Traité des Maladies de la Moelle épin.* par Ollivier d'Angers. Vol. II, p. 518.

but, besides this, a partial destruction must also exist, in cases where a tumour becomes extremely large, and particularly if it exists in a relatively narrow place, as is the case, in the vertebral canal, for the medulla oblongata and a part of the Pons Varolii, compared to other parts of the encephalon.

I wish I had room here to publish the very interesting and numerous cases I have collected,* and which show that the Pons Varolii and the Medulla Oblongata may be compressed, and sometimes as much as to be reduced to one half or one third of their size, if not more, although there is hardly any paralysis produced, except during the last days of life. These facts are extremely interesting in a pathological as well as in a physiological point of view.

There is one thing which appears to be well proved by these facts, and especially by those in which a layer only of white matter has been left either in the Medulla Oblongata or in the Pons Varolii, it is that these organs are not the centre, neither an important part of the centre, for volition or for perception of the sensitive impressions; because if they were, these faculties should be lost. We may understand that the power of transmission of nervous actions (either for sensations or for volitions) may be kept in a part where there remains only some fibres, but the higher faculties of Perception and Volition would, certainly, be destroyed, had they their seat in organs so much altered as the Pons and the Medulla Oblongata, sometimes, are.

As these pathological cases might be considered as proving that communications, between the spinal cord and the parts of the encephalon anterior to the Pons, are not necessary for the performance of voluntary movements and for the perception of sensitive impressions, and, as such a conclusion might also be drawn from the result of certain experiments, recently published, I think I ought to examine here these experiments. It is certainly important to make this examination and to show that such a conclusion is not right, because, were it admitted to be correct, all the researches and conclusions exposed in the three first sections of this paper, about the region where the decussation of the

* With the exception of two or three of these cases, I have borrowed them from modern writers. As a guarantee of exactitude of observation, I give here a list of the most known among these writers: Bouillaud, Cruveilhier, Gendrin, J. Cloquet, Duverney, Gama, Esquirol, Stanley, Lieutaud, Lenhossek, Romberg, Abercombie, Velpeau, Guersant, Rilliet, Barthez, Bayle, Hutin, Pariset, Burnet, Ollivier d'Angers, Lebert.

voluntary motor and sensitive nerve-fibres take place in the nervous centres, would be of no usefulness and no meaning at all.

Two talented Physiologists, Drs. Vulpian and Philipeaux,† relate some experiments, in one of which they had divided transversely a lateral half of the medulla oblongata, about one line in front of the nib of the *calamus scriptorius*. The result, as stated by the authors, was: conservation of the voluntary movements and of sensibility in the two sides of the body.

As regards voluntary movements, the experimenters themselves say that the animals could not stand on their feet, but they consider as a voluntary action, a great agitation of the four limbs, consisting in alternative flexions and extensions. I will, first, remark that the experiment could not prove much about voluntary movements, because it had been made on the decussation of the pyramids, leaving there, undivided, a number of voluntary motor fibres belonging to the two sides of the body. We certainly might consider that the agitation was voluntary and produced by the undivided fibres. But we have found that if the lateral hemisection of the medulla oblongata is made a little higher, *i. e.* above the decussation, so that, only the voluntary motor fibres of the opposite side of the body have been divided, there is, also, agitation on both sides, though much more on the side of the section. But this agitation is not a voluntary action; it is convulsive as I will presently try to show. Before any division of the medulla oblongata, and, even, before having laid it bare, the mere fact of having divided a number of the muscles of the posterior part of the neck, as Longet has found, is followed by a very great agitation in the whole body, at every time the animal attempts to move.

This trouble comes from the fact that the head, being drawn, by the contraction of the anterior muscles of the neck, towards the sternum, the medulla oblongata is drawn upwards and excited, and so are the spinal cord and its nerves. Now, after the section of a lateral half of the Medulla Oblongata, this irritation of all the intra-spinal nervous system continues and only changes somewhat in nature, precisely because the will cannot act, as well as before, to diminish the agitation. This is one cause of agitation, but not the only one; there is another in the irritation existing in the wound. Besides, the animal, upon which a section of a lateral half of the Medulla Oblongata has been

† Essai sur l'orig. de plus. paires des nerfs craniens, 1853, p. 54.

performed, is attacked with this peculiar and so curious convulsive affection, which manifests itself by a rotatory movement, (see my *Exper. Researches*, p. 18 to 23) and we well know that, in man, this rotation is never voluntary, and that when it takes place in a man who has his consciousness entire, the rotation occurs, although the will tries to prevent it. Therefore the agitation of an animal, upon which a lateral half of the Medulla Oblongata has been cut, cannot be considered as a voluntary action. It may be partly voluntary, in one side of the body, when the section is made above the decussation of the pyramids, but then we have merely a confirmation of the facts and conclusions exposed in the first sections of this paper.

As to sensibility, I need not say much. I had myself published, long ago, that a section of a lateral half of the Medulla Oblongata, above the roots of the pneumo-gastric nerves, does not appear to destroy sensibility, if we decide that this faculty exists, when there are cries and agitation, as have done Drs. Vulpian and Philipeaux. I had gone farther and shown that if, instead of merely cutting a lateral half of the Medulla Oblongata, we divide this organ entirely, where it unites with the Pons Varolii, (as we have already said in a preceding section of this paper) sensibility *appears* to exist everywhere, *i. e.* agitation and cries are observed after every excitation. But, as long as it will not be proved that cries and agitation are not mere reflex actions, we are entitled to consider them as such. Drs. V. and P. say that the animals, upon which they had cut a lateral half of the Medulla Oblongata, appeared to be more sensitive than normally. We agree partly with them: there is, but on one side only of the body, an apparent increase of sensibility, and this side is the side of the operation, whether it is performed upon the Medulla Oblongata, or upon the spinal cord, as we have said in the first section of this paper.

The same results are obtained, as regards sensibility, whether the hemisection is made on the Medulla Oblongata or on the Pons Varolii.

It is known that there is a question, connected with our subject, which has been the cause of great discussion between Flourens, Calmeil, Ollivier d'Angers, Longet and others. This *quæstio vexata* is no more a question, after what we have said. The question was whether the medulla oblongata has a *crossed* action for sensibility and voluntary movement. The solution is, I believe, given in the first section of this paper, and, as to the reasons for which there has been discrepancies of opinions, what we have just said of the experiments of Drs. Vulpian

and Philipeaux, explains how erroneous and contrary deductions may have been obtained.

To conclude on this subject, I will say that the experiments of these two physiologists and the pathological cases, in which, although there was a considerable alteration of the Pons or of the Medulla Oblongata, no decided paralysis existed,—are certainly not able to prove against our admitting that a communication, by voluntary motor and by sensitive fibres, is necessary between the spinal cord and the parts of the encephalon anterior to the Pons. The number of fibres establishing the communication may diminish, without any notable diminution in the intensity of sensations and in the strength of voluntary movements. But, it seems that there ought to be an alteration in the harmony and regularity of the voluntary movements, and in the power of judging from what place comes a sensitive impression.

5. *Cases in which an alteration in the two sides of the Pons Varolii appeared to have produced a paralysis only in one side of the body.*

I know of no case where the Pons, being much and equally altered, on both sides, there has been a mere hemiplegia; but there are some cases, in which an alteration, more considerable on one side than in the other, has produced paralysis in one side only of the body, which side has been that opposed to the most altered in the Pons. Such facts cannot prove more than the facts above related, in which an alteration has existed on both sides of the Pons without producing paralysis.

6. *Cases in which an alteration existing in one side of the Pons Varolii, or in the neighboring parts, appears to have produced paralysis in both sides of the body.*

There are some cases of this kind on record; but they cannot prove much, because an alteration in structure, sufficient to produce paralysis, may extend to a certain distance from the side of the Pons, where is a tumour, to the other side. Now, many alterations may escape the search, made with the naked eye, and, as a tumour is found, observers have thought its existence was sufficient to explain the symptoms observed before death.

I will give here only a short analysis of two cases of this kind, which I find in the remarkable work of my friend, Prof. Lebert, on cancer.*

* Traité pratique des maladies cancéreuses, 1851, p. 806.

Case I.—Headache, blindness, pupils dilated, weakness and rigidity of the limbs, tetaniform contracture of the trunk, convulsions, respiration difficult and noisy, speech embarrassed, death.

Tumour of the anterior part of the left lobe of the cerebellum, which had pushed the Pons Varolii and made, in its anterior part, a cavity, in which it was lodged.

Case II.—Cephalalgia; not long before death, hemiplegia left side; incomplete paralysis of the right side; contracture, frequent shaking; lancinating and great pain in the left limbs; at last, involuntary expulsion of urine and fœcal matters.

A tumour, not larger than a pea, is found in the middle and inferior part of the right side of the Pons.

No physician, acquainted with nervous diseases, will believe that in such a case there was no other alteration, besides the slight displacement or compression of nervous matter, in the immediate neighborhood of so small a tumour. The following fact will show that when an alteration appears to exist only in one side of the encephalon, when there has been paralysis, in the two sides of the body, the microscope is necessary to decide if there is no other alteration more able to give us the reason of the double paralysis.

This fact is so important, that I will give it with all the details, and in the very words of Prof. Hughes Bennett, who has related it. "Another well remarked case was that of a man who entered the Infirmary, under Dr. Paterson, in 1842. All the symptoms of acute softening were present; paralysis of the left side, including rigidity and contraction of the left arm, dullness of intellect, and tonic spasms of the muscles of the mouth and neck. The right side was also affected in a slighter degree. As the case excited considerable interest, great care was taken in examining the brain. When the lateral ventricles were opened, it became a question whether the right corpus striatum was softened. Several persons applied their fingers, and endeavored to ascertain the point. As the manual examination proceeded, the normal consistence of the part diminished, until at length it presented all the appearance of pultaceous softening. In this state it was shown to Dr. Paterson, who naturally enough considered it to be the result of disease. I differed from him in opinion: first, because I had carefully observed the gradual increase of the softening in the manner alluded to; and secondly, because disease of the corpus striatum, in one side

of the brain, could not have explained the well marked symptoms which existed on both sides of the body. When the Pons Varolii was bisected, Dr. Peacock, who conducted the examination, conceived it to be softened; others who examined it, could perceive no difference in the texture; its color and consistence were unchanged. Reasoning from the symptoms, the lesion was very likely to exist. But how, it was argued, could a judgment be formed; we ought to reason from facts, not theories? Here, then, was an evident lesion of the corpus striatum, which explained nothing, and a problematical lesion of the Pons Varolii, which, however, did it exist, would satisfactorily account for the symptoms. In this state of uncertainiy the microscope was sent for, and I demonstrated, and made evident to Drs. Paterson, Peacock, and all the students present, that the corpus striatum contained no granular corpuscles, whilst in the Pons Varolii they were very abundant. I have endeavored to describe what took place on this occasion, from which it must be evident that had not the microscope been appealed to, the right corpus striatum would have been pronounced softened; whilst the real lesion in the Pons Varolii mght have escaped observation. Under such circumstances, this case would have added another to the inexplicable observations with which the records of nervous diseases abound."*

After such a fact, we, certainly, are entitled to conclude, that the cases, in which it is said that an alteration, only in one side of the Pons, has produced paralysis, in both sides of the body, cannot prove anything, because the microscope has not shown that the other side of the Pons was not altered.

7. *Cases in which an alteration, in one side of the Pons Varolii or of the neighboring parts, has produced paralysis, in the same side of the body.*

I regret not to have room enough to treat at length this subject. I will merely give, here, one only the four or five cases that are on record, as far as I know; then I will relate, shortly, the different modes of explanation of these facts, and, at last, I will show that these cases cannot be opposed to what I have said, as regards the place of decussation of motor and sensitive nerve-fibres.

Case.—Hemiplegia of the left side, without loss of sensation in the

* Monthly Jour. of Med. Science. April 1851, p. 365.

arm and leg, but in the left side of the face both sensation and motion were entirely lost. Loss of hearing in the left ear.

A tumour was found in the left side of the Pons Varolii, which compressed the origin of the 5th and 7th nerves against the base of the skull. The tumour was of the size of a walnut, of a firm consistence, and extended into the left crus cerebelli.*

This case is positive, and the co-existence of the paralysis in the face and the body, on the same side, point out, at once, a striking difference between the ordinary cases and this *extraordinary* one. In the ordinary cases, paralysis exists on the side of the alteration in the face, and in the opposite side of the trunk and limbs.

I will remark that in this case there was no paralysis of sensibility in the limbs, and I will add that it has been so, in all the cases, but one, that I know, in which paralysis has existed on the same side as the alteration.

Now, how to explain these facts?

1st. There is an explanation to which we are naturally led: it is, that in the men spoken of in these cases, there was no decussation at all of the sensitive and voluntary motor nerve fibres. This would explain, not only the cases relative to the Pons, but also the cases in which alterations have existed in one side of the cerebrum, of the cerebellum, of the corpora striata, or of the thalami optici, and in which hemiplegia has existed on the same side.

Longet says that, sometimes, he has not found any appearance of decussation of the pyramids, in man, and I have also made the same observation on animals.

2d. It may be that the decussation of voluntary motor and sensitive nerve-fibres, instead of taking place as usually, take place in some men, only in front of the Pons, between the corpora quadrigemina and the crura cerebri.

3d. It may be, as it results from what we have related above, and what has been found by Prof. H. Bennett, that the true alteration, which really produces the paralysis, and which can be detected only with the microscope, is in the side of the encephalon, opposite to the side where an alteration is seen, with the naked eye.

Now, I ought to say that, by examining the circumstances of the cases, in which there has been only a paralysis of movement, I am led

* Stanley in Lond. Med. Gazette. Vol. I.

to think that there was no decussation of the pyramids, and that the decussation of the voluntary motor fibres either did not exist at all, in these cases, or existed anteriorly to the Pons. As to the case, in which there was together a paralysis of movement and of sensibility, I think it may be explained by what results from Prof. Bennett's researches.

Both the theories actually proposed about the place where exists the decussation of the voluntary motor and of the sensitive nerve-fibres, one which is the theory of Longet, Foville, Valentin and others, and the second which is mine,—are, as much, in apparent opposition with these cases, (of paralysis in the same side where is the alteration) one than the other.

If it were true, as admitted by Foville, Valentin, Longet, etc., that the decussation of the voluntary motor and sensitive nerve-fibres, takes place partly in the Pons and partly behind and before this organ, a considerable alteration of its sides, producing paralysis, should produce it, in both sides of the body; so that, if paralysis exists, only in one side, be it the side of the alteration or the other, the fact, in both cases, appears as much in opposition with the theory.

But I ought to say that if, as it seems to be there are, positively, cases of paralysis, in one side of the body, with considerable alteration of the same side of the Pons and no alteration whatever in the opposite side of the encephalon, these cases can prove nothing, but that there was no decussation of voluntary motor or sensitive nerve-fibres, existing behind or in the part altered, in the subjects of these cases. Therefore, no conclusion can be drawn against any of the theories, the object of which is to show where the decussation takes place, when it exists.

8. *Cases and experiments which appear to prove that there are, in various parts of the encephalon and in the spinal cord, motor nerve-fibres, which are not voluntary motor.*

As to the spinal cord, the existence, in it, of fibres, which are motor but not voluntary motor, has already been pointed out by some physiologists, and I have, already, spoken of this fact, in another section of this paper. As it is not necessary for my object here to demonstrate the fact, I will merely state that, I believe, it is certainly true that there are such fibres. As to the encephalon, not only the doctrine of the existence of such fibres is a new one, but the proofs themselves,

upon which it is grounded, are mostly new or presented, here, in a new light.

For a long while, since Hippocrates, it has been admitted that in the wounds of the brain, the convulsions are always in the injured side, while paralysis is in the opposite side. Haller, though inclined to admit this doctrine, had remained in doubt about it.

Flourens* thought he had decided the question, and he gave the following conclusions:

1st. The cerebral lobes and the cerebellum never give convulsions.

2d. The quadrigeminal tubercles give convulsions in the opposite side.

3d. The Medulla Oblongata and spinal cord give convulsions in the injured side.

Flourens has been led to erroneous conclusions, partly, because he has not taken notice of what has been observed in man, partly, because he has particularly experimented on birds.

Burdach, according to J. Mueller,† has given the following statistics: out of 268 cases of alteration on one side of the encephalon, there has been 10 cases of paralysis in both sides of the body and 258 of hemiplegia, of which 15 in the side of the alteration. Convulsions took place in 25 cases, in the side of the alteration, and in only 3 cases in the opposite side.

From many facts recorded by Andral, Rochoux, Rostan, Abercrombie, Bright, Bouillaud, Lallemand and Romberg, it results that convulsions in the side of the alteration appear to be less frequent than convulsions in the opposite side. So that the results arrived at by Burdach, are opposed to the results of these more recent writers. But whatever may be about this, it is sufficient, for my object now, that it is certain that convulsions may take place, either in the side where is the alteration or injury of the encephalon, or in the opposite side.

Now, there are other and very curious facts which also prove that contractions of certain muscles of the body may take place either on the side of the body corresponding to the injured side of the encephalon, or on the opposite side, exactly as in the cases of ordinary convulsions, as I have just said. And, in fact, this might have been foreseen had it been known, that a convulsive state of certain muscles is the cause of the phenomena of which I will now say a few words.

* Loco cit., p. 120.

† Manuel de Physiol. Ed. Littré, 1851, Vol. I, p. 783.

If a puncture or rather a slight section is made, on mammals, in different parts of the encephalon, we see quite different effects, according to the part which has been injured. The animal *turns* round or *rolls* over itself, (see my paper on *turning* and *rolling* in *Exp. researches*, p. 18) and this, as I will prove, elsewhere, in consequence mostly of local convulsions. Turning or rolling take place after an injury of the right side, sometimes on the right, sometimes on the left side of the body, as it will be seen in the following list, in which, to avoid repetitions, we will say merely left or right, according to the side of turning or rolling of the man or animal. The sections of the parts of the encephalon, I will suppose to have all been made, on the right side of the encephalon.

1st. Anterior part of the thalamus opticus, according to Schiff. Right.

2d. Posterior part of the thalamus opticus, also according to Schiff. Left.

3d. Some parts of the crus cerebri, near the thalamus opticus, according to my experiments.—Left.

4th. The hind parts of the crus cerebri.—Right.

5th. The testes and nates, according to Flourens.—Right.

6th. Anterior and superior part of the Pons Varolii, according to my experiments.—Left.

7th. Anterior part of the processus cerebelli ad pontem.—Left.

8th. Posterior part of the processus cerebelli ad pontem, according to Magendie.—Right.

9th. Place of insertion of the auditive nerve or this nerve itself, according to my experiments.—Right.

10th. Place of insertion of the facial nerve or the mere drawing out of this nerve, according to myself and my friend Dr. Martin-Magron. Right.

11th. The medulla oblongata, according to my experiments.—Right or left, according to the place and to the extent of the injury.

12th. The spinal cord near the medulla oblongata, according to my experiments.—Left.

In almost all these experiments, turning or rolling exist on the side where there are convulsions in certain muscles. The spasms exist in all cases, in the muscles of the neck, frequently in those of the trunk and sometimes in those of the limbs. The convulsions of the muscles of the neck and trunk are sufficient, without the assistance of the limbs

to produce rolling, as I have frequently seen, after the amputation of the four limbs.

It seems quite certain from these two series of facts (*i. e.* pure convulsions in one side of the body and the local spasms coexisting with turning and rolling), that convulsions may be produced in muscles of one side of the body, by the same alteration which produces paralysis in the opposite side. From this it results that there are two different sets of motor nerve-fibres, which appear to originate from the same place, in many parts of the encephalon, one set being composed of voluntary motor fibres, which then become paralysed, and the other set composed of motor fibres, which are not voluntary motor, because, were they so, their alteration should produce paralysis and we should, therefore, have, then, a paralysis in both sides of the body, although the alteration should exist only in one side of the brain. But what are these fibres, as they cannot be voluntary motor?* They, certainly are able to produce muscular contractions, and, therefore, we are entitled to call them motor, but we do not know whether the irritation acts directly upon them, or if it is by a secondary, that is a reflex action that they become excited. It may be, and this seems very probable, that they are merely reflecto-motor.

But, whatever is the truth about their nature, they are motor and they exist in great number, in all the isthmus of the encephalon, and particularly in the Medulla Oblongata. We can by this fact understand why there are so many motor fibres belonging to the anterior columns of the spinal cord which are not voluntary motor.

9. *Anatomico-pathological dissections which appear to prove that there are nerve-fibres, coming from the spinal cord, which decussate in parts above the Medulla Oblongata.*

The interesting facts, discovered by Dr. Ludwig Türck of Vienna†,

* It is well known that no movement is produced in the limbs and trunk, when an excitation of any kind is brought upon the cerebral lobes or even the corpora striata. As the voluntary motor fibres extend in the encephalon, if not into the cerebral lobes, at least, into the corpora striata, it is certain that there, these fibres cannot be irritated by our means of excitation. It may be that these fibres remain so, *unirritable* all along, from these parts of the encephalon to their termination in muscles, and that the nerve-fibres which produce contractions when we irritate them, either in the encephalon, in the spinal cord or in the nerves, belong only to the other class of motor nerves, the existence of which I am now trying to establish.

† See Braithwaite's Restrospect, Amer. Edit. Part 27, p. 344.

showing that, when there is an alteration of a part of the encephalon, the nerve-fibres which go from that part into and along the spinal cord, become very much altered in their structure; these facts have proved that there is a decussation, for these fibres, in the Pons Varolii or in parts before it.* I do not think necessary to discuss at length the value of these researches, in relation to the subject of this paper. I believe it is sufficient to say that, as long as there are other fibres, besides the sensitive and the voluntary motor, which originate from the different parts of the encephalon, nothing in the curious facts, described by Dr. Türck, may prove against our admitting, that the decussation of the sensitive and voluntary motor fibres, takes place where I have tried to show that it does.

This means of study of Dr. Türck will have the greatest value when (and only then) it will be combined with all the other means that science already possesses, to determine what are the kinds of nerve-fibres existing in the nervous centres, and what is their respective course.

GENERAL CONCLUSIONS.

In this paper we have tried to show:

1st. What is the place of the decussation of the sensitive and voluntary motor nerve-fibres, in the cerebro-spinal axis. The conclusions, on this subject, have already been exposed at the end of the third section.

2d. That, as regards the objections which might be made to my conclusions, relative to the place of decussation of the sensitive and voluntary motor nerve-fibres, I have tried to prove successively:

a. That reflex movements alone, and not sensations and volitions, exist in monsters, deprived of a great part of their cerebro-spinal axis.

* Dr. Türck is disposed to consider the alteration produced, in these cases, in nerve-tubes, as a result of absence of action. I believe this view is partly right, but there is another cause of alteration, which is,—according to what I have tried to show in a paper presented, more than a year ago, to the *Société de Biologie*,—that the nerve-tubes are endowed with capillarity, and that, liquids in which are placed a divided end of them, are absorbed, and conveyed very far in their canal, and, there, altering their contents. The spinal cord may become secondarily affected, in that way, by diseases of the different viscera, and this may prove to be a good means of finding the course of the roots of the nerves in the spinal cord. I had already made some researches about the disposition of these roots, a year ago, and I intend to resume them as soon as possible.

b. That, when the spinal cord, the Medulla Oblongata or the Pons Varolii, are altered, even considerably, sensibility and volition may continue to exist, because there are, still, communications by nerve-fibres through the altered part, between the nerves of the trunk and limbs, and the parts of the encephalon, in front of the Pons.

c. That if the reasons, given by many physiologists, to prove that the Pons Varolii is the seat of the centre for volition, and for perception of sensitive impressions, were true, we should have to admit that the Medulla Oblongata is the centre (or, at least, a part of the centre,) for these faculties, because the same reasons appear to prove so, for this organ, as for the Pons.

d. That very likely these faculties have not their centre, (at least, their principal centre) in the Pons Varolii, and, still less, in the Medulla Oblongata.

e. That it seems that, in some men, the sensitive and voluntary motor nerve-fibres do not decussate at their usual place, and that, in consequence, some rare cases may exist in which an alteration in one side of the Pons Varolii or of the Medulla Oblongata, will produce paralysis of the same side of the body.

f. That there appears to be, in many places of the encephalon, nerve-fibres, which are not voluntary motor, and which, nevertheless, go to muscles, either on the same side of the body as the side of the encephalon, from which they originate, or on the opposite side, and that these muscular nerve-fibres are able to produce convulsions, when they are irritated by an injury or an alteration in the encephalon, so that convulsions may take place either on the paralysed side or in the other.

g. The results of the researches of Dr. Ludwig Türck cannot, in the actual state of science, prove against or in favor of any doctrine relative to the place of decussation of sensitive and voluntary motor nerve-fibres.

ART. IV.—*A Case of Incontinence of Urine, Successfully Treated with Strychnia.* By ROBERT HARRISON, M. D., Prince George County, Virginia.

Mrs. F. about eighty years of age, was attacked in the spring of 1854 with intermittent fever, which yielded readily to blue mass and sulphate of quinia. Upon my last visit to this lady, indeed, after having left the room, I was informed by the attendant nurse, that Mrs. F. had been suffering more than a year and a half with an abundant urinary discharge, which had induced another physician, who was in charge of the case to suppose this patient to be labouring under diabetes. I was also informed that a variety of remedies had been ineffectually prescribed. Without giving the case any special attention, I hastily prescribed nitrate of potash in barley water, a random shot to ascertain, if possible, the nature of the disease I had to combat. In the mean time, I gave this case farther consideration.

Upon my next visit I found the condition of things aggravated; so I wheeled about and altered my mode of attack. I learned upon careful enquiry of the patient and friends, and also from observation, that she was somewhat paralytic and anæmic, there being much debility and some effusion, particularly under the eye-lids, with some disposition to general effusion into the cellular membrane. I then ordered a blister to be applied over the region of the bladder; after vesication, the skin was to be removed, and half a grain of strychnine to be sprinkled on the denuded surface morning and evening. These remedial agents acted like a charm. My most sanguine expectations were more than realized.

But a question arose in my mind, viz: whether the result was due to the blister, or the strychnine, or the conjoint operation of the two.

My patient continued to improve for a week or more; after which time she had a relapse and a return of the incontinence with considerable fever. Upon examination and enquiry I concluded that all might be attributable either directly or indirectly to a recurrence of the chills, and prescribed accordingly. The fever was arrested.

I then concluded the same means would arrest the incontinence, and so prescribed; but her very intelligent daughter informed me that the blister had an unpleasant aspect: ordered it to be washed and poulticed, and $\frac{1}{12}$ of a grain of strychnine to be administered in a bread pill night and morning, which had the happiest effect. These pills have not en-

ly controlled the disease, but improved the general health of the patient; and, notwithstanding they have been kept up for months, no unpleasant effect has yet resulted. Candour obliges me to confess, however, that, on several occasions, there has been a return of the disease; but in every instance the relapse might be readily traced to error in diet, either as to quality or quantity. Indulgence in fresh fish, as well as several other articles of food, would almost invariably produce a relapse. The instructions on this point were to ascertain what suited the patient and confine her to it.

At times the pills were entirely suspended; again diminished one half; then increased to ¼ gr. per day. For months the pills have not been used at all. The general health has been restored, but the intellectual condition is that of second childhood, occasionally crying without just cause, thereby evidently betraying the imbecility occasionally attendant upon old age.

LECTURES.

I. *A Review of the Surgical Clinic of La Charité.* By Alfred A. M. Velpeau.

Having examined inflammations in their relations to anatomy,* I proceed to speak of certain phlegmasiæ, which differ from those which have hitherto claimed our attention, in their nature, or else in the causes on which they depend; phlegmasiæ which have always peculiar characteristics, no matter in what organ or region they are developed.

Erysipelas is one of these phlegmasiæ. It is true that the region on which this affection is manifested may slightly modify its appearances, as we see in erysipelas of the face and scalp; but these modifications are unimportant. Erysipelas is of a different nature from all other inflammations.† This is a point on which I desire particular attention,

* See Vol. IV., p. 31, p. 111.

† This is the opinion "that was doubtfully held by John Hunter, but which has been clearly substantiated by recent pathologists" (Druitt). It is strange that two authors who are regarded, in this country, as of the highest authority, and whose text books are in the hands of all students and young men, should completely ignore this important truth. Mr. Lawrence and Mr. Miller, to whom we refer, treat of ery-

for there are many surgeons who describe this affection, and treat it, as a phlegmasia modified by the anatomical element in which it is developed. Let me point out, briefly, the distinctive features of this variety of inflammation.

You find that the inflammations in general can be produced at pleasure. You can excite, if you choose, a phlebitis, or a diffuse or circumscribed phlegmon, by means of mechanical irritation. But you cannot excite erysipelas at pleasure; it *may* supervene when you apply irritants to the surface, but it is not developed necessarily; its development is due to a cause which is beyond your control.*

The progress of phlegmonous inflammation can be arrested by suitable treatment; erysipelas is never arrested; whatever is done, it pursues its course, and terminates unaffected by any treatment that is adopted.

Inflammations in general last for no determinate period; their duration cannot be calculated or foreseen, whereas you can always predict when an erysipelas will terminate.

Erysipelas, then, is an inflammation of a specific nature, and its cause is unknown.† This is a fact of great importance; if you fail to recognize it, you will fall into the error of those physicians who make this disease an ordinary inflammation, a simple dermitis.‡

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sipelas as of a simple *cutitis*. Mr. Lawrence defines erysipelas "inflammation of the skin," and as respects its causes, he asserts that no difference prevails between it and inflammations (LAWRENCE, in *Medico-Chirurgical Transactions*, Vol. 14, p. 2; p. 36.) Mr. Miller places erysipelas among the "affections of the integument," and defines it "the inflammatory process, resident in the superficial textures,—skin and subcutaneous areolar tissue; prone to spread, and tending to the true inflammatory crisis." His *erythema* is the same thing, only "resident chiefly in the *rete vasculosum cutis*." These views appear to us about as rational as those of Willan, who made erysipelas a skin disease, class *bullæ*, because it was often accompanied by vesication.

[G. A. O

* The language of the accurate Dr. Alison is almost identical. "This form of inflammation may be said to be specific. It differs from that which may be excited, at pleasure, by mechanical or chemical irritation of the surface of the body, although it supervenes in injuries so excited. The body here appears to be under the influence of a cause, which produces both a peculiar inflammation, and a peculiar kind of febrile action; and the case is therefore justly held to bear as much analogy to the febrile exanthematous diseases as to the inflammations." (ALISON, *Outlines of Pathology*, p. 461.) O.

† In like manner, one of the best English pathologists, after describing the symptoms of erysipelas, remarks that they "show the presence of something more than a form of inflammation, and that something must be considered to be a poison." And, farther on, "the fact that persons often *sicken* with fever before the erysipelatous inflammation appears, is a sufficient evidence that the poison acts on the constitution as well as on a part." (WILLIAMS, *Principles of Pathology, Am. Ed.* 1844, p. 252). O.

‡ In a preceding note, we have cited two popular English surgeons out of a multitude who inculcate the erroneous doctrine referred to in the text. We will in-

You will meet sometimes with apparently mild cases of erysipelas, which will nevertheless end in death, a result which the observation of ordinary inflammations would not lead you to anticipate. Remember that in this affection it is not the inflammation which is dangerous, but the constitutional disorder (*l'état général*) from which it arises. It is not the superficial phlogosis of the scalp which destroys, but the general condition of which this is only a manifestation.

In the course of the past year, we have had 25 cases of erysipelas. This is a small number, and I am inclined to think that all our cases are not set down. Of this number, 6 died, which is a very large proportion, one in four; that's a good many! We remark, however, that traumatic erysipelas is a much more serious affair than that which arises spontaneously. Erysipelas of the head, for example, usually terminates favorably unless there is a wound in that region; but when it accompanies a wound, the case is dangerous; the wound by itself is a serious matter, and the complication adds to its gravity. As regards surgical erysipelas, therefore, we must consider what appertains to the disease which gives rise to it, and what to the erysipelas itself.

Another peculiarity of erysipelas resides in its absolute duration, when uncomplicated. You often hear me insist on this point, for it is the foundation of a correct knowledge of this disease. I lay it down, then, as a principle, that *pure uncomplicated erysipelas never lasts over three or four days.* This proposition clashes with the prevailing ideas on this subject, for authors generally assign to erysipelas a duration of from eight days to a fortnight. These authors are right in one point of view, and I will explain how. Erysipelas is usually developed in a series of patches. Each patch lasts about three or four days; at the end of that period the skin resumes its normal aspect, the inflammation has subsided. But, adjacent to the patch of which we have spoken, another appears, and then a third, a little farther on, and in this way erysipelas will traverse considerable portions of the body. Whatever the number of patches, each single patch lasts only three or four days; but a succession of patches may protract the entire duration of the disease, and the erysipelas will not disappear altogether for a week or fort-

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stance, in like manner, a physician, of the *positive* French school, M. Valleix, who requires mathematical demonstrations, and admits only what he can see and handle. "Erysipelas, he says, is inflammation of the skin (simple erysipelas), sometimes extending to the subcutaneous cellular tissue (phlegmonous erysipelas)" (VALLEIX, *Guide du Médecin practicien*, Vol. V, p. 349.) Not a word of its being an inflammation *sui generis*, with a tendency to spread widely along the surface of membranes, and in the cellular tissue; secreting but little lymph, and that little incapable of organizing a barrier to its progress; and connected with a constitutional disorder which is the essence of the disease. We regard it of the utmost importance that practitioners should clearly distinguish frank inflammation of the skin, which is, in fact, *erythema*, from what Copland describes as an "asthenic inflammation of the integuments, affecting them more or less deeply and extensively, with diffused tumefaction, and a disposition to spread, *depending upon constitutional disorder* (*Dictionary of Medicine*, Vol. i, p. 818), which is erysipelas. O.

night. Unlike the phlegmon, which passes through all its stages in the place where it was first developed, erysipelas spreads along the skin, invading one region after another.

Erysipelas differs moreover from ordinary inflammations in several physical characteristics. To one of these, especially, I desire your particular attention. I refer to a narrow festooned or zig-zag border which limits erysipelas at its circumference; this border or selvage rises a very little above the general surface, as can be seen, on close inspection or felt by passing the finger lightly over it.

Another not less important characteristic is the irregular defined line of demarcation which limits an erysipelatous patch. In the other phlegmasiæ, in the phlegmon, for example, the inflammation has no abrupt limit; the redness blends gradually into the neighbouring white and healthy skin; in erysipelas, on the contrary, it is as intense at the periphery as at the centre.

It is highly important that you should be well acquainted with these two signs, for, in actual practice, there are a multitude of physicians who confound erysipelas with diffuse phlegmon* ("diffuse inflammation of the cellular tissue" of later English authors) and angeioleucitis. The latter affection, in fact, is likely to be confounded with erysipelas,† but you will avoid error if you recollect that angeioleucitis is not limited by a festooned raised edge; that it gradually dies away, blending with the surrounding healthy parts; and that it does not leave one region and presently attack another; on the other hand, erysipelas has a fixed duration; it lasts only three or four days in one locality, and you cannot lessen this period, whatever you may do; angeioleucitis, on the

* Practitioners may be excused for confounding phlegmonous erysipelas and diffused inflammation of the cellular tissue, since Dupuytren himself described them under the same title of phlegmondiffus. His pupil, M. Vidal, explains the difference in these affections as follows: "If the inflammation of the skin extends to the subcutaneous cellular tissue, it is *phlegmonous erysipelas;* if the integument is involved secondarily and in consequence of the inflammation of the cellular tissue, it is *diffuse phlegmon.*" (Pathologie Externe, Vol. i, p. 580). This author's description of erysipelas is worthy of quotation. He proposes, in sketching its history, something very different from a description of *cutitis*:—There are inflammations which have a tendency to limit themselves; others which march perpendicularly, so to speak, attacking the thickness of organs, and producing perforations and deep ulcers; there are other inflammations, on the contrary, which are essentially *extensive*, which spread over large surfaces. Erysipelas is the type of these inflammations. They are not often fatal when they attack the skin, but when developed on the serous and mucous membranes, or when they invade the cellular tissue, they are very serious; in the latter case they constitute what is termed phlegmonous erysipelas or diffuse phlegmon. Add to the extensive nature of erysipelas the cutaneous redness disappearing under pressure, the slight swelling of the subjacent cellular tissue, and the ordinary termination in resolution and desquamation, and you have the elements of the only definition admissible in the present state of science, (*loc. cit.* p. 538). O.

† M. Velpeau elsewhere observes that erysipelas is to be distinguished from angeioleucitis and phlebitis by its not following the course of the vessels in red lines or bands.

contrary, may be cut short in twenty-four hours; the same thing is true of diffuse phlegmon‡ and other inflammations.

There is another proposition which I lay down as a principle: *We cannot abridge the duration of erysipelas, and we cannot cure it.* These ideas are opposed to the convictions of many practitioners, and the reason of it is, that the majority of physicians fail to take into account the natural duration of the disease. They think that they cure an affection which soon disappears when left to itself.*

‡ It is somewhat strange that this disease (diffuse phlegmon), unconnected with erysipelas, though not uncommon, and certainly not unimportant, was completely passed over, until a comparatively recent date, by writers on surgery, the first systematic account of it being given by the younger Duncan in 1824. His memoir (*Cases of diffuse inflammation of the cellular texture, with the appearances on dissection*) is contained in the "Transactions of the Edinburgh Medico-Chirurgical Society." O.

* At the risk of trespassing on the reader's patience, we venture to subjoin a few observations on some points in the treatment of erysipelas. Time and experience have not sufficed to dispel the difficulties which have ever beset this subject, nor to bring the profession to any unanimity in regard to it. Now as in the days of Rhases and Avicenna, two conflicting dogmas enlist their zealous partizans. We are assured, on the one hand, that in erysipelas we cannot bleed too much; on the other, that we may as well put a bludgeon to the head of an erysipelatous patient, as unsheath a lancet in his interests. To cite two familiar authorities; Mr Lawrence preaches to the text of depletion, wholesale depletion, and nothing but depletion; Dr. Robert Williams to that of wine, port wine, and nothing but port wine. (*Lancet*, 1850, p. 590.) This is not the place to enter fully on a discussion of the constitutional treatment of erysipelas. We shall simply express our conviction that of these exclusive doctrines, the latter is safest of application, at least to the disease as it commonly appears in cities. We should prefer, however, that the tonic and stimulant treatment should be, in the majority of cases, preceded by a mercurial purgative, and perhaps an emetic, and combined with the use of mercurial alteratives, for however we may laugh at the theory of Hippocrates (*Injuries of the Head*, Syd. Soc. Ed. Vol. i, p. 464), we may usefully imitate his practice, all observation having proved that the complaint in question is frequently connected with disorder of the chylopoietic viscera. We do not mean to assert that the depleting treatment is never useful, but we regard its efficacy as very limited. M. Louis found that in thirty-three cases of erysipelas of the face treated by moderate blood-letting, the duration of the disease was diminished, on an average, less than a day. (*Recherch. sur les effets de la saig. dans quel. mal. inflam.*)

We must now be permitted a few words on the local treatment of erysipelas. We made some remarks on this subject at a meeting of the Medico-Chirurgical Society of Richmond, which were published at p. 13 of the last volume of this Journal, to which Dr. Morland takes exception in the July number of the *Am. Jour. of Med. Sciences*. Dr. Morland objects to our assertion that there is no "certain proof of the efficacy of any of these [local] applications," and triumphantly adduces the evidence of his fellow-townsman, Dr. Durkee, who "claims nearly universal success" in treating erysipelas, by "pouring" tincture of iodine on the affected part;—which Dr. Morland regards as pretty "precise evidence." The learned secretary and ourselves have different views of "precise evidence." Mr. Higginbotham claims nearly universal success (every case but two) for his treatment of erysipelas by the nitrate

of silver. M. Abeille claims nearly constant success in the treatment of cholera by strychnia. But the profession has not admitted these claims. M. Bonnafont claimed, a little while ago, to cure every case of orchitis, in a few days, with collodion, but MM. Velpeau and Ricord speedily exposed the fallacy of these pretensions.

The statements which we made, and which we maintain, are supported by the following respectable evidence:

Of 89 cases of erysipelas, M. Velpeau treated 9 by inunctions of mercurial ointment, 5 by inunctions with ordinary fat, 12 by emetics and purgatives, 18 by blisters, 14 by bloodletting, 7 by cauterization, 2 by incisions, and 22 by emollients. Not a single case was arrested in its progress. (BASSEREAU, in *Jour. hebdom. de med.* 1834.)

Vidal says that he has observed the use of the actual cautery, the nitrate of silver, and other energetic local means; that he has himself used pure creosote, but that none of these remedies put a stop to the erysipelas. (*Path. Externe.* Vol. i, p. 547.) These topical remedies, adds M. Rayer, "are of far less utility that persons who recommend them imagine; I have often used mercurial inunctions on one side of the face and left the disease to itself on the other side, and the affection has disappeared from one side as soon as from the other." (*Mal. de la Peau*, Vol. i.)

Erysipelas, then, has been attacked locally, by Larrey with the hot iron, by Dupuytren with blisters, by Higginbotham with lunar caustic, by Vidal with creosote, and none of these means have transformed the peculiar spreading inflammation into an adhesive self-limiting one. M. Nèlaton states (*Path. chir.* Vol. i, p. 91), that muriatic, sulphuric, tartaric acids, white precipitate, acid nitrate of mercury, and camphor, have likewise proved inefficient. Velpeau has renounced his lotions of sulphate of iron; Ricord is forced to explain the repeated failures of the Neapolitan ointment, by assuming that it was rancid when it did not cure. Dr. Dobson, of Greenwich (*Med. Chir. Trans.* Vol 14, p. 206,) has pecked at erysipelatous surfaces with "minute punctures;" Mr. Hutchinson (*Ibid.* Vol. 5, p. 278) has cupped them: and Mr. Lawrence and Professor Chelius (*Syst. of Surg.* Vol. i, p. 123) still leech them, with no other effect than a temporary pallor of the skin. We might fill a page with an enumeration of the local remedies for erysipelas which have proved useful only to their inventors,—from Celsus' ceruse down to Dr. Meigs' Kentish ointment; but the catalogue would be hardly edifying. As to Dr. Durkee's iodine treatment, we learn that it is no longer heard of, even in Boston.

We think that we have shown, even though Velpeau's positive statement was insufficient to establish the fact, that local remedies do not cure erysipelas. We may be allowed then to repeat the assertion that we made on the occasion referred to at the commencement of this note, that the local treatment of erysipelas is of secondary importance, and to recommend with Pearson, Dessault, Watson, and South, that topical applications should be of a soothing character, adapted to the sensations of the patient. Such appliances, though not curative, will mitigate suffering, and accord with the first maxim of medicine, *primo, non nocere.* O.

CHRONICLE OF MEDICAL SCIENCE.

MATERIA MEDICA AND PHARMACY.

1. *On the Use of Glycerine as an Internal Remedy.* By J. L. CRAWCOUR, M. D., of New Orleans.

Two papers by Dr. Crawcour published in the New Orleans News and Hospital Gazette, on the substitution of glycerine, the base of all animal fats, for cod liver oil in the treatment of tuberculosis and disease of a kindred character have attracted our attention, Dr. Crawford says:

I wish to draw attention, particularly at present, to the *special* action of glycerine on the economy, and the perfect safety with which it can be used as an internal remedy. For the past twelve months I have used it in every case of disease where formerly I should have used cod liver oil, and with superior benefit; for while it seems to possess all the remedial virtues of this latter agent, it is its superior in taste, in not disordering the digestion, and in its property of combining with any other remedy.

In several cases of phthisis, of scrofulous disease generally, in mesenteric disease in children, I have used it largely and successfully; and in children, its sweet and agreeable taste gives it a great advantage over cod liver oil, the only agent I can compare it with, in its therapeutic action. In addition to its special anti-strumous property, I find that it materially aids in the assimilation of salts of iron, especially of the iodide, and I now rarely order either iodine, or the iodide of iron, without combining them with glycerine. Quinine also, is soluble in it, without the aid of sulphuric acid, and to some slight extent is divested of its bitterness.

The dose in which I usually administer it is from one to three drachms three times daily, in an ounce of water; in from one to two drachms, it, in a short period, relieves the cough, improves the digestive powers, and appears to increase the fat-producing principle in phthisical patients; in larger doses it has in a few instances produced nausea; it is, however, essentially necessary to its successful employment that it be obtained pure, and this is a matter of some difficulty, for it is ordinarily the result of the preparation of the common lead plaster, and consequently contains traces of lead, but by the process of Dr. Morfit, who decomposes lard, or oil, with hydrate of lime, it can be procured chemically pure, and at a very cheap rate. Should my communication induce other physicians to try it, the purpose of my writing to you will be answered, as it will be an equal boon to the physician and patient, if a remedy can be discovered equal in properties to cod liver oil and without its nauseous taste and smell.

I have recently tried it as a solvent for phosphorus, which latter we have hitherto hardly been able to use in medicine, as its solution in oil is so nauseous that we can rarely induce patients to swallow it, and its solution in

ether is so dangerous, that I question whether any physician of ordinary prudence would prescribe it. But in glycerine, it is not only nearly as soluble as in oil, but is miscible with water in all proportions, and is comparatively tasteless and odorless. About two grains dissolve readily in an ounce of boiling glycerine, and from experiments on myself, I consider it a powerful and valuable stimulant. Of the above solution, which, after the nomenclature of Messrs. Cap and Garot, I would call the glycerole of phosphorus, I took one drachm in a wine-glassful of water, with which it intimately blended; there was hardly any taste or smell, and did not produce those garlicky eructations said to be the result of the phosphorus in oil. Its effect on my system was that of a stimulant: in about half an hour the pulse became quickened, both at the wrist and at the temples, the cheeks flushed, the skin became warm, and suffused with moisture, there was a certain amount of mental excitement, and after a short time there occurred a feeling of oppression at the præcordia, accompanied by palpitation of the heart, while after a certain time the cerebral excitement was followed by a slight feeling of confusion, accompanied by sleeplessness. Each time that it has been taken in this dose, it has, on myself, produced these same effects. I therefore look upon this quantity as excessive, and would suggest that if this remedy be used, it should be in doses ranging from ten to thirty minims. It may be combined with any other drug, and I look upon it as a valuable addition to our list of therapeutic agents; not that the use of phosphorus is new, but hitherto it has been excluded from us from the difficulty of finding a proper solvent—this now, I believe, has been discovered in glycerine.

In the March number of the same journal, Dr. Crawford proceeds to show why glycerine may be substituted for cod liver oil, and his remarks on that point are full of interest.

Modern chemistry, among many of the boons it has presented to medicine, has shown us that in a few grains of the alkaloid quinia, may reside the powers of an ounce of bark, that in a minute atom of atropine may be present all the useful properties of a comparative large dose of belladonna, and it is probable that a similar course of investigation may demonstrate to us, in what really consists the superiority of cod liver oil as a medicament to other oils. That it is not solely as an oil, that it exerts its influence, is evidenced by the fact that other oils, as oil, will not produce the same effect, and it is not to its combination with iodine, a bile constituent, that its power is due, is proved by the fact of these agents failing to produce the specific therapeutic action of cod liver oil, even when combined with fatty substances. But there is one constituent which, though common to all oils, yet exists in such large quantities in cod liver oil, as at once to direct our attention to it. I allude to glycerine, the base of all animal fats, and which is not only present in a greater excess in cod liver oil, than in most other oils, but is found in a larger proportion in that variety of oil, which modern experience has pronounced to be the most easily assimilated, and the most efficacious—I mean the pale oil.

The following are the proportions of glycerine, in 100 parts of cod liver oil:

100 parts of	brown cod liver oil, contained	9.111	of glycerine.
"	light brown, - - -	9.073	"
"	pale " - - -	10.117	"

this latter variety showing a marked increase in the quantity of this constituent.

The best substitute hitherto found for cod liver oil in the treatment of phthisis, has been the oil extracted from the cocoa nut. Dr. Theophilus Thompson in his consumption hospital, made many experiments on the therapeutic value of various oils. He found that olive and almond oils, unless combined with phosphorus, produced but negative results, whilst the oil of the sunflower seed which abounds in carbon was equally unsatisfactory; but from the cocoa nut oil he obtained results of the most favourable character.

On examining more closely into the cocoa oleine mentioned by Dr. Thompson, I think we shall come to the conclusion that its efficacy above other oils, does really depend on the large amount of glycerine it contains, for although we have no qualitative analysis of it, yet its physical properties so closely resemble those of glycerine as to warrant us in this assumption. In the first place its mode of preparation, viz: the purification by means of an alkali, in other words its incomplete saponification, would tend to remove a large amount of the fatty acids and leave the glycerine comparatively free; and secondly its mode of combustion is not that of an oil, but exactly corresponds with what we observe when glycerine is ignited, for this also burns with a pale blue flame. I am disposed to believe therefore that, as in the Peruvian bark, its chief efficacy depends upon the quinia it contains, and as in the old fashioned remedy the spongia usta, its remedial virtues were due to the iodine its constituent, so in cod liver oil and cocoa oleine, the active principle may be said to reside chiefly in the glycerine they contain. If this be so, the advantages that glycerine possesses over both these remedies, in agreableness of taste, in ease of assimilation, and above all in the property it possesses of entering into combination with almost every article in the materia medica, excepting ether, must warrant its adoption in their place, where, as in phthisis, a remedy has to be continued for months, and perhaps for years, it becomes almost an absolute necessity that it should be as little repugnant to the patient as possible, and if of two remedies, both possessing equal claims to attention, one has the superiority in the article of taste, it becomes our duty to employ it.

2. *The Materia Medica of the Sandwich Islands.* By L. H. Gulick, M. D.

We extract from an interesting paper in a recent number of the New York Journal of Medicine, the remarks of Dr. Gulick of Ascension Island, on the Materia Medica of the Hawaiian Groupe. We will take this opportunity to say, that the whole paper on the climate and diseases of these islands is well worth an attentive perusal.

Dr. Gulick argues that to pass unnoticed the Materia Medica of a savage people is unreasonable and impolitic. All medicines in the beginning were used empirically, and the science has been built up upon empiricism, and he thinks it not impossible that something may be learnt even from a study of the Hawaaian dispensatory.

The following are some of the drugs originally used by the Hawaaians, and will most probably be of interest to our readers:

The *Arum esculentium* is a plant very nearly allied to the arum maculatum and arum tryphillium in all its external habits and properties, and

probably, like them, possesses a "property of stimulating the secretions, particularly those of the skin and lungs." (U. S. Dispensatory.) It is the principal article of diet among the Hawaiians. The heat of the oven dispels its peculiar acrid principle and renders it a very nutritious and valuable article of diet, had in great esteem by foreigners, but especially by the natives. The acridity is probably reduced by cultivation, but a very considerable portion of it is still retained. Says Dr. Chapin:—"It is, when raw, very styptic and acrid, and the skin of the root is used by the natives in the cure of dysenteries and intestinal hæmorrhages."

The *Cucurbita lagenaria*, or gourd, is used as a purgative. It is, in its medical properties, allied to several of the cucurbitaceæ, particularly to the cucumis colocynthis. "The pulp of the root is used," says Dr. Chapin, and in large doses it is terribly drastic. The inordinate doses given by the natives sometimes produce dysentery, rapidly fatal." Dr. Judd relates the case of a woman purged to death with this article by a native physician for an imagined disease. "About four feet of the green running vine of the bitter calabash, or gourd, thirty-two of the hollow stems which support the leaves, and about one ounce of the dry pulp, next the shell, of the dried gourd, were pounded together on a board and the juice mixed with about three pints of water." "It is used by them successfully in dropsies. I once knew a native, with abdominal dropsy, cured by one of his own physicians with this article, after he had been treated unsuccessfully by foreign skill." (Dr. Chapin.)

A variety of *Ipomea* is mentioned by Dr. Chapin. "The roots are used by the natives as an emetico-cathartic. I tried it somewhat, and found it had efficacy; but the doses requisite were so large and the trouble of preparing it such, I abandoned it." I am utterly unable to give the specific title. It is questionable whether its medical powers have been fully ascertained.

The *Aleurites triloba*, or candle-nut, is one of the articles of the Hawaiian Dispensary. "The kernels of these are stuck, one over another, like beads upon a fibre of cocoa-nut leaf, a foot long, and, containing a considerable portion of inflammable oil, they give sufficient light for ordinary purposes, the flame communicating downward till the last piece is consumed. Sometimes five or six such strings, two yards in length, are wrapped together in a leaf of banana, and carried before the king, as flambeaux, when he travels by night." (Tyerman and Bennet's Journal.) Dr. Chapin remarks:—"I know it to be used as a cathartic, but never experimented with it myself." An oil extracted from this nut forms an article of export for painting—may it not have available medicinal properties?

The Piper Methysticum, a remedy which has lately been brought prominently before the English profession, and which has already been noticed in our columns, as a new remedy in gout, is thus described by Dr. Gulick:

The *Piper methysticum*, called "*ava*," by the Hawaiians, is one of the most important of their indigenous Materia Medica. From it they prepared a narcotic drink, esteemed throughout Polynesia. The bark of its stem is possessed of the peculiar properties of the plant, but it is the root which was principally used by them. "They prepared it for use by mastication. A person chews it thoroughly, and ejects it with the accumulated saliva into a dish, in which state it is drunk by the patient. Most of their medicines they prepare in the same manner." In continuation,

Dr. Chapin says to the author:—"I suppose it might be serviceable as an anodyne: I gave it repeatedly in powder. It did not seem to possess narcotic properties, and after a number of trials with it I gave it up. The natives, as they said, used it to cure cutaneous diseases, by producing desquamation of the cuticle. They give it daily in such quantities as at length to accomplish the object. I think the article deserves further trial." Mr. Bingham informs me that "the juice is highly valued, and was much used both as a luxury and as a medicine, as alcohol still is in wiser countries. A singular effect of taking a course of ava was the cracking and coming off of the cuticle over the whole body of the patient, with which, it was maintained, the system parted with maladies." Mr. Jarvis says:—"Its effects were very pernicious, covering the body with a white scurf, * * inflaming the eyes and causing premature decrepitude. It was also taken as a medicine, and was supposed to be an effectual remedy for corpulence." Mr. Ellis speaks of the "burning effect and unpleasant taste of the ava." A few years since, a gentleman, long a resident of the Islands, proposed exporting it to the United States, and there manufacturing of it some nostrum—which might no doubt, have become as popular as Townsend's Sarsaparilla! Its medicinal properties are, perhaps, allied to those of the *Piper augustifolium*, or Matico, of which the U. S. Dispensatory says:—"Its most useful internal application is, probably, as an alterative stimulant to the diseased mucous membranes." The Dispensatory refers to an article by Mr. Morson, on the *Ava*, in *The Pharm. Journal and Transactions*, Vol. 3, p. 472, which I have not been able to obtain.

3. *The Action of Copaiba Balsam.* By DR. ROQUETTE, of Nantes.

In this paper, to be found in the "Union Medicale," December 1854, Dr. Roquette contends that copaiba only acts as a curative agent when it is present in the urine, and becomes thus a topical remedy. Hence, in those inflammations of the genito urinary organs which do not come in contact with the urine during its passage, the copaiba exerts no beneficial influence. It cannot be considered useful in vaginitis, balanitis, uterine catarrh, epididymitis and blennorrhagic ophthalmia, unless in these affections the patient takes the copaiba for the purpose of using the copaibiferous urine as an injection or topical application, when it is probable that its curative effects would be displayed. But such a circuitous route is not necessary, and would certainly not be very agreeable.

We have been long satisfied that the copaiba should be considered as exerting its influence mainly as a local remedy, and these views of Dr. Roquette confirm us in that belief. The propriety of applying, then, this very disagreeable and nauseating remedy to the seat of disease, directly in the form of an injection, will at once strike the reader. Some practice in the use of the copaiba as an injection, more especially in gleet and chronic vaginitis, has enabled us to express an opinion as to the correctness of Dr. Roquette's views.

4. *An Examination of the Rumex Crispus, or Yellow Dock.* By J. H. SALISBURY, New York.

The Rumex Crispus, familiarly known in our country as the "dock weed," is one of the greatest pests which the farmer has to contend

with, often overrunning his best fields, and when it once acquires a foothold, its tenacity of life is so great, that all the arts of the agriculturist will oftentimes prove unavailing.

Dr. Salisbury, in the March number of the New York Journal of Medicine, takes the unfortunate weed through the most tremendous analytic processes, and before he finishes his rigorous enquiry, we almost wonder what there was about this vulgar herb, which made it worthy of such a scientific examination. The doctor analyses its leaves, fresh and dry; its seed, its stem and bark; and then after minutely noticing its ash, both of the leaf and the stalk, proceeds to give the root a most searching examination.

This careful series of experiments shew satisfactorily why this plant should be such an exhauster of the soil, as from 30 to 40 per cent. of its dry matter is found to consist of nitrogenous compounds. It is however, more with regard to the remedial virtues of this plant that we wish to bring it to the reader's notice; and Dr. Salisbury speaks of its medical properties and uses as follows:

> The leaves are sometimes eaten for greens. They are somewhat laxative, and form an excellent diet in scorbutic complaints. The roots contain a yellow dye, and are said to be sometimes used in coloring. The dye, on exposure to the atmosphere for some time, changes into reddish yellow color.
>
> Though its species is not officinal, it has enjoyed, at different times, considerable reputation as a medicine. Its medical properties are those of an astringent and a mild tonic. In this respect it has some resemblance to rhubarb. It is supposed to possess an alterative property, and has been employed in decoction and ointment in scorbutic disorders and cutaneous eruptions, and has attracted some attention in the treatment of itch.
>
> The powdered root has been recommended as a dentifrice in cases of spongy gums. Recently it has been employed quite extensively in syrups and patent medicines.

Riegel discovered in the Rumex Obtusifolia a peculiar principle, which he styled *rumicin*, and which was analogous to rhubarbarin, one of the active principles of Rhubarb. Dr. Salisbury's analysis of the R. Crispus, has also resulted in the discovery of a crystalline principle which he thinks to be probably the same as the rumicin of Riegel.

MEDICAL PATHOLOGY AND THERAPEUTICS.

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1. *The Therapeutic Action of Lupulin.* By Dr. ZAMBACO.

Debout's observation on the favourable influence of lupulin in quieting painful erections, induced the author to institute some experiments

with the medicine, which, to prevent mistakes, he administered to the patients with his own hands. The form was threefold; pure lupulin, the tincture, or mixed with an equal part of sugar. The doses were different: of pure lupulin, 1—16 scruples (these high doses caused no disturbance of the nervous system); the tincture, 2—16; the mixture with sugar, 2—3. From eight well-marked cases of painful erection, consequent on gonorrhœa, out of a much larger number, the author was enabled to draw the following conclusions:—Lupulin possesses a remarkable effect upon the genital organs; the erethisms were quieted in four-fifths of the cases. It is of therapeutic utility when there exists the necessity for keeping the penis in a state of rest. Camphor given in large doses, with a similar object, both irritates the alimentary canal, and often fails in its end. The sedative and anti-blenorrhagic influence of lupulin depends upon a resinous, æthero-oily principle; while the bitter principle yields a real tonic. The author has seen lupulin given with good effect in scrofula.—*Bull. de Ther. Aôut.*, 1854; (from *Schmidt's Jrbuch.*, 1854. No. XII.)

2. *The use of Quina in Phthisis.* By Dr. MUNTENDAM.

The foreign correspondence of the Medical Times and Gazette gives us in a late number, many extracts from the Dutch Journals, of an instructive and interesting character. Amongst them we especially notice a statement given by Dr. Muntendam, of the clinical results obtained by him from the use of quina in phthisis pulmonalis.

The number of cases briefly reported by him amounts to 22; by the denomination "phthisical," he understands those who labour under pulmonary tubercles, who, at the same time, are feverish, and whose febrile condition is dependent on the morbid process in the lungs. He thinks that, from his observations, he may infer: 1st. That quina administered with, and often without, acetate of morphia, is capable, in very many cases, of prolonging the lives of phthisical patients, and that it not unfrequently even saves them, if fresh depositions of tubercle do not again excite the morbid condition. 2nd. It is capable of prolonging life where the local process is not too extensive; when administered in the commencement of the disease it may, especially in children, married and puerperal women, if circumstances are in other respects favourable, save life. 3rd. The frequency of the pulse does not diminish under the use of quina until later, after the assimilation is restored; or it may also do so in a person labouring under pulmonary tubercle, who has been attacked with intermittent fever. 4th. The transient hyperœmias or determinations to the head, chest, or intestinal canal in these patients do not contraindicate the use of this remedy. The fever for the most part disappears after some time, but is easily re-excited; or the febrile attacks may be obstinate, and may require the administration of quina to be continued for some weeks. In acute, and in many chronic cases, the cough and expectoration are at first increased; an indirect effect of the quina is also the recurrence of the menses; the effusion in the lungs remaining, as œdema, or hy-

drops-fibrinosus, after the congestions have disappeared, is then expectorated under the form of a gelatinous, more or less frothy mucous mass, or as serum, together with, in chronic cases, globose, nummular sputa. 5th. Dietl justly observes, that the effect of quina on the organs of the circulation is unexplained. 6th. Sulphate of quina administered continuously, and in small doses, excites neither dyspnœa, nor diarrhœa, nor any other injurious symptom. 7th. Sulphate of quina deserves to occupy a principal place in the treatment of many, not to say of all cases of phthisis pulmonalis. 8th. Exclusion or antagonism between tuberculosis of the lungs and intermittent fever, does not exist, unless, perhaps, when by the latter term we understand "feverish dyscrasia."

3. *Something Further on Uræmia.* By Dr. Gobee.

The author of this essay, after giving a sketch of the groupe of phenomena comprehended under the term, concludes with the history of a case in which the functional symptoms of that condition, and Bright's disease played a conspicuous part.

The patient, a man of 26 years of age, came under treatment with effusion in the left pleura, which had already lasted some weeks. He continued in the same state for above three months, after which time the case assumed all the appearance of uræmia. Although all the distinctive characters of the affection co-existed in a well-marked degree, the presence of carbonate of ammonia could not be demonstrated either in the expired air, the blood, or any of the secretions. The patient sank in a fortnight from the time the first uræmic phenomena had appeared. On *post-mortem* examination circumscribed arachnitis was observed on the upper surface of the brain; there was very great cerebro-spinal effusion; however, the author is of opinion, that uræmia must be looked on as the principal cause of death, when the condition of the kidneys, which were both found in the second stage of Bright's disease, is taken into account.—*Med. Times and Gazette.*

SURGICAL PATHOLOGY AND OPERATIONS.

1. *On the Aphonia which sometimes occurs after Ligature of the Common Carotid.*

At a meeting of the *Surgical Society* of Paris, Dec. 6th, 1854, M. Hippolyte Larrey read a case of gun-shot wound, communicated by M. Bertherand, physician to the hospital of Algiers, which gave rise to an interesting discussion. The case was briefly as follows:—

A serjeant-major was struck, on the 26th of June, 1854, by a ball, which entered a little below the left orbit, passed through the antrum of Highmore and the zygomatic fossa, and escaped just in front of the mastoid process. The eye, the dental arch, and the roof of the palate were intact; a fissure entended into the auditory canal.

The patient lost much blood, and was brought to the ambulance in a state of insensibility.

Some splinters of bone were extracted. The left nostril and the upper portion of the pharynx were filled with coagula.

Cold compresses were applied to the wound, and efforts were made to bring about reaction.

The patient soon vomited, bringing up large clots of blood. In about two hours, there was alarming hæmorrhage from the wound, from nose, ear, and mouth; the pulse became small, the skin cold and clammy. It was clear that deep-seated vessels of some magnitude had been divided. The trunk of the internal carotid was wounded very likely, for there was, in all probability, a fracture of the petrous bone extending into the carotid canal.

M. Bertherand tied the primitive carotid, and the hæmorrhage ceased at once. Both ends of the ligature were cut off; the wound was brought together by sutures, and dressed with cold water.

The patient passed a restless night. There was violent reaction on the next day, and bloodletting was employed. The symptoms soon amended. Some fragments of bone were extracted from the ear and from the anterior orifice of the wound. The patient was carried to the hospital of Dellys. On the 8th of July he was nearly well, but there remained some dysphagia, and incomplete aphonia.

On the 15th of September, an abscess opened in the neck, and the loop of the ligature was discharged.

During his convalescence, the patient suffered from two attacks of cholera-morbus, which left him in a very debilitated state, the aphonia being more marked than ever.

The serjeant was now, six months after his accident, in good health; he was present at the meeting, and a number of surgeons examined him.

M. Robert (of the Hospital Beaujon) called attention to the aphonia which had followed the tying of the carotid; he had himself observed a similar phenomenon in performing the same operation. What was the cause of this? No doubt some nervous branch was included in the ligature. The pneumo-gastric, inferior laryngeal, and great sympathetic were the nerves most likely to be injured in laying bare the carotid. In his own case, M. Robert had carefully isolated the vessel, but when the ligature was tightened, the patient declared that he should suffocate. The thread was loosened, and after examination it was tied a second time, no nervous branch being included in it. Nevertheless, the voice remained hoarse for seven months.

What nerve could have been injured? Not the pneumo-gastric, for it could be plainly seen behind the artery and without the ligature; not the recurrent nerve, it was too much out of the way (the ope

was on the left side); not the great sympathetic, which lay along the vertebral column, and was not meddled with. M. Robert had always remained in doubt; yet the accident was not an infrequent one; it had recently occurred to M. Chassaignac.

M. CHASSAIGNAC (of the Hospital Lariboisière) remarked that, in his case, he could not decide whether the pneumo-gastric had been included in the ligature, or not. The ligature came away on the 15th day; the patient died on the 21st. The vein, artery, and nerve were comprised in an indurated cicatricial tissue. It was impossible to tell whether the nerve had been wounded, or tied.

M. BOINET mentioned that he had assisted Roux in an operation for a wound implicating the carotid, in the course of which Roux several times raised the pneumo-gastric with his forceps. Whenever he did so the patient endeavoured to vomit. The artery was secured with a temporary ligature, which was rather loose; the nerve was included in this ligature. There was no subsequent aphonia.

M. RICHET (of the Hospital Lourcine) observed that Roux had himself communicated to the Society a case in which he had tied the pneumo-gastric along with the artery. The patient soon died. M. Richet was disposed to attribute the functional disorders of the respiration, of the heart, and larynx, which supervene in operations on the carotids, to injuries of branches of the sympathetic. M. Claude Bernard's researches had established that division of the cervical portion of the sympathetic would produce, among other phenomena, nausea and vomiting; it would seem proper, therefore, to refer the accident under discussion to division of some of the ramifications of the sympathetic in the vicinity of the carotid.

M. A. GUERIN (of Hôtel-dieu) considered the cases of MM. Robert and Chassaignac too imperfect to solve the problem under discussion. He thought that consecutive aphonia after operations on the carotid depended on injury of the pneumo-gastric.

Professor JULES CLOQUET observed that different results succeeded the rough handling, the wounding, and the complete division of nerves by the ligature. He had seen Richerand tie the spermatic cord *en masse*, drawing the ligature very tight, and no ill effects followed; whereas when the cord was loosely tied, lumbar pains were manifested. As to the case under discussion, M. Cloquet thought that the accident was caused by some lesion of branches of the sympathetic.

M. Huguier (President) explained the aphonia in the case under consideration by reference to an anatomical arrangement, which he had himself pointed out, consisting in an anastamosis of the superior and inferior laryngeal nerves, forming a plexus in front of the carotid which furnished branches distributed to the glottis and other parts of the larynx.

We may compare M. Bertherand's case with one reported by our own Professor Horner.* A criminal endeavoured to escape capital punishment by plunging a knife into the right side of the neck, be-

* See AMERICAN JOURNAL of MEDICAL SCIENCES, August, 1832.

neath the angle of the jaw. There was profuse hemorrhage, and Dr. Horner tied the carotid opposite the cricoid cartilage. As the ligature was tightened the patient fainted, and the voice was reduced to a whisper. Three weeks after the operation, the aphonia continued. Dr. Horner attributed this accident to the stoppage of the circulation in the superior thyroid artery, an explanation which seems insufficient, when we reflect on the rapidity with which the circulation is restored in such cases, and the anastomoses between the branches of the carotids. O.

2. *Femoral Hernia containing an Ovary.* By DR. WILLARD PARKER.

In the January number of the *N. Y. Med. Times*, Professor Parker reports a very interesting case of strangulated crural hernia. Having found it necessary to operate, Dr. Parker freely divided the falciform process, and then attempted to reduce the contents of the sac, but could not succeed. He could push sac and all up. He opened the sac; it contained a small loop of intestine, which was dark, though not gangrenous; the strangulated parts were very firmly embraced by the neck of the sac. This was incised freely, and the bowel was returned. "I found something left behind," says Dr. Parker, "which was dark, shreddy, and vascular, adherent by a small band to the side of the sac. I saw it was not omentum, and concluded it might be the product of some former inflammation. I concluded to dissect away the mass; it bled, and I carried a ligature around the whole. When I drew upon the ligature, there came into view the *ovary*. This demonstrated to my mind that the strange portion I had taken away was the fimbriated extremity of the fallopian tube. The ovary was reduced, the wound dressed, and a rapid recovery ensued.

Dr. Parker states, that he has examined authorities without succeeding in finding any parallel to this anomalous case. Examples of *hysterocele*, indeed, he finds on record, but none in which the ovary alone had escaped from the abdomen. Such cases are unquestionably rare, yet a few have been reported. Poti relates one, (*Surgical Works*, Vol. I, p. 192,) which he observed at St. Bartholomew's Hospital. We have not the book at hand, but here is an analysis of the case, taken from a recent French work on surgery:

"A woman 23 years of age came to the hospital on account of two swellings in her groins, in front of the openings in the tendons of the oblique muscles. These tumours were neither inflamed nor strangulated; but the pressure to which they were subjected by the movements of the lower limbs caused such severe pain, that, as it was not possible to reduce them, it was thought proper to extirpate them, in order to restore the woman to a state in which she might earn a living. The *tumours were formed by the ovaries contained in small peritoneal sacs.* Before excising them, the pedicle connecting them with the abdomen was tied. The operation was followed by no accident; the woman's health returned; but the menses, which had been regular, did not re-appear; the mammæ became atrophied; the mus-

cles acquired greater volume; in a word, the constitution of the woman was so modified as to assimilate more closely to the constitution of the male."

In Billard's treatise on children's diseases, is related the very remarkable case of Josephine Romer, a young infant, who presented a rounded tumour in the left inguinal region, which puzzled every one who examined it. It could not be returned into the abdomen, it did not diminish on pressure, or increase when the child cried.* Josephine died of pneumonia, and an opportunity was afforded to examine the tumour, which proved to be a hernial tumour formed by the left ovary —"*formée par l'ovarie gauche descendu par le canal.*" O.

3. *Extirpation of the Uterus.* By Professor GEDDINGS.

In a case of inversion of the womb, of eighteen years standing, Dr. Geddings recently removed that organ by a very simple and painless operation. The uterus hung down between the patient's thighs in the shape of a large pyriform tumour, covered by a thickened mucous membrane, which presented many points of ulceration. The orifice of the urethra was not much deviated from its normal position. Dr. Geddings passed his fingers around the attachment of the tumour to the upper part of the vagina, excluded the convolutions of intestine which were felt there, and passed a strong ligature around the part. The tumour was then removed by a single sweep of the knife. The after treatment was simple, and recovery speedily took place. The tumour was a solid homogeneous mass, its cavity having become obliterated by adhesion of the opposing peritoneal surfaces.

This case is interesting on account of its long duration. Patients with inversion of the uterus usually succumb to the monthly drain upon their systems before many menstrual periods have elapsed. Of twelve cases which Mr. Crosse* traced to their termination, only one survived for five years. Dr. King,† however, mentions the case of a lady who had lived twenty years under this affection, though suffering from frequent hæmorrhages; and a case in which the inversion had existed for thirty years is related in Burns' 'Midwifery.' Dr. Esselman,‡ of Nashville, removed by the ligature alone an inverted uterus of twelve years standing, which was mistaken for a fibrous polypus.

As to the propriety of such operations in general, the opinions of authorities are at variance. Boyer considered them unjustifiable; Dr. Locock thinks they should not be lightly resorted to; Velpeau says that the surgeon who has to come to a practical decision on the question is placed in a "state of cruel perplexity." On the other hand, a considerable number of cases are on record in which the operation has been successfully performed. Mr. Forbes has presented a tabular statement of twenty-six such cases, in a valuable paper

* BILLARD. *Traité des maladies des enfants nouveau-nés et à la mammelle*, p. 492.

* Crosse on Inversio Uteri, p. 171, *note*.

† Glasgow Medical Journal, Vol. I, p. 172.

‡ Western Journal of Medicine and Surgery. August 1843.

in the *Medico-Chirurgical Transactions* (vol. xxxv, p. 127). Probably the opinion of Mr. Hodgson, elicited in a debate on this subject, reported in the 'Lancet' (vol. 2, 1852, p. 54), furnishes as good a rule of action as we can attain at the present time. It would seem, he says, that the operation of removal might be attempted in young persons, but the proceeding was not so justifiable later in life, as the patient became more tolerant of the disease, and the hæmorrhage diminished. Not only was the operation justifiable in early life, but it would appear to be desirable, as in all cases the patients died when the disease was left alone.

As to the mode of operating, it would appear that the ligature deserves the preference. Of 26 cases thus treated, Mr. Forbes states that 21 were successful; whereas of 8 cases treated by ligature and subsequent excision, 5 only were successful. Velpeau treated two cases by simple excision; one died, the other recovered, though her life was in great jeopardy. O.

4. *Gastrotomy after Rupture of the Uterus.* By Dr. Neill.

A patient in the third hour of labour with her sixth child, was seized with intense pain in the right side while in the act of defecation. The head of the fœtus receded, and could be felt through the abdominal walls. Twelve hours after this rupture, Dr. John Neill, of the Pennsylvania Hospital, made an incision of six inches through the linea alba, while the patient was under the influence of ether, and extracted a hydrocephalic child, placenta, and numerous coagula. After grave constitutional disturbance, the patient recovered and was able to leave her room in twenty-one days. Dr. J. R. Mason gives the details of this case in the *Transactions of the College of Physicians* of Philadelphia. A very similar one occurred to Dr. Gilman, of Maine, last year and is reported in the last volume of this Journal. (Vol. III, p. 77.)

THERAPEUTICAL RECORD.

Cancer of the Breast.—M. Richmann in the Gazette des Hopitaux for December, reports the successful treatment of mammary cancer by the local application of iodine. This is not the first time we have seen this remedy favorably spoken of, but we must confess to some doubt as to the correctness of the diagnoses under such circumstances.

M. Richmann applied to the tumour which, he contends displayed all the evidences of malignant disease, a bag of tow saturated in iodine, and at the end of seventeen weeks the tumour had entirely disappeared.

Cholera—Castor Oil in.—The *coup de grace* has been given to the castor oil treatment of cholera, by a committee of the London Board of Health, who thus close their report.

From the above abstract, the details of which have been carefully investigated by the committee, it appears that in 89 cases of cholera treated by different practitioners with castor oil, on the plan recommended by Dr. Johnson, 68 were fatal, recovery having occurred in only 15 cases, whilst 6 are still under treatment.

The same experiment was made with this "new remedy" in the Dreadnought Hospital ship, where of 19 cases, 12 died; whilst in the Glasgow Hospital, after losing 7 out of 9 patients, the treatment was abandoned.

Excision of the Knee Joint.—Mr. Butcher in the last number of the Dublin Quarterly Journal, gives a table of thirty-two operations for excision of the knee joint, of which number five resulted fatally, or a mortality of about 15 per cent. He compares this result with the mortality after amputation of the thigh in the London hospital as given by Mr. Erichsen, which shews the proportion to be as high as 20½ per cent. after amputation for disease, and more than 50 per cent. after amputation for injuries, thus demonstrating that the danger of excision is considerably less than that attending amputation of the thigh.

Hiccough.—The Dublin Medical Press recommends as a specific for this troublesome affection the internal use of chloroform in small doses. The dose should be repeated as often as the hiccough returns, and two or three appeals to the remedy may be necessary.

Hooping Cough.—Since the publication in our last number of the statistics of hooping cough, treated with nitrate of silver, we have observed that Dr. Watson of Glasgow, by uniting Joubert's cases with his own, is enabled to present 167 cases of this intractable disease, treated by the introduction of the nitrate of silver into the larynx. Of this number, 96 were cured in two weeks, 61 in three to four weeks, 9 resisted the treatment, and 1 died.

We lay some stress upon the method of cure here suggested, because the treatment is certainly correct enough in theory, and it is important that it should be carefully tested in practice.

Inflammatory Rheumatism.—In the Boston Medical and Surgical Journal for March 22nd, we notice with interest a reported case of acute rheumatism treated with hyposulphite of soda in ten grain doses with the most marked results. Dr. J. H. Warren who reports the case, declares that this remedy has a wonderful power in exciting the secretion of the kidneys, and as an antiphlogistic agent it is worthy of attention. Dr. Warren's case of inflammatory rheumatism was discharged cured on the 8th day.

Laryngitis.—Nitrate of Silver.—Dr. Ebert employs inhalations of nitrate of silver in substance with great benefit, in all inflammations of the laryngeal mucous membrane. He has employed the nitrate of silver also in solution, after the manner of Green, but has never been able to satisfy himself that the larynx was really entered. The mode in which the solid caustic is introduced is as follows: Three grains of the nitrate are mixed with one drachm of sugar; the powder is placed in a steel pen, which is itself firmly inserted in a quill open at both ends. The little apparatus is then put into the mouth, so that the end of the steel pen shall be on the root of the tongue; then the lips are closed round the quill, and the patient inspires forcibly. The first attempt is almost always a failure, and the nitrate is only tasted on the root of the tongue, but the patient soon learns to manage it very well; a little cough and irritation follow, but no great uneasiness. For young children this method does not answer, and a special apparatus must be used.—*Annalen des Berlin Char. Krankheiten.*

Œdema of the Glottis.—In the more advanced stages of laryngitis, when effusion has taken place into the sub-mucous cellular tissue, it has been suggested by a correspondent of the Medical Times and Gazette to incise the mucous membrane on the anterior surface of the epiglottis, and thus give exit to the effused fluid. This treatment, though not original, is worthy of some attention, and the operation might be performed with a hernia knife, and with but little difficulty.

Pannus.—In the treatment of this affection, which arises from the development of vessels, and plastic effusions, beneath the epithelial layer, and anterior lamina of the cornea, Dr. Evariste Warlomont, of Brussels, proposes the practice of blennorrhagic inoculation, although the plan has been condemned by many ophthalmologists. He recommends the introduction of purulent matter obtained from the eyes of new-born children, or from gonorrhœal ophthalmia, which produces violent inflammation of the eye. This, after a time, subsides, and results in a radical cure of the pannus. Dr. Warlomont adduces thirty cases successfully treated by this bold method of cure.

Photophobia.—M. Van Holsbeck, resident physician of St. John's Hospital at Brussels, gives the most positive assurances of the efficacy of tincture of iodine, applied externally, in the treatment of photophobia. The lids and orbicular region are painted over once or twice in the 24 hours with a camel's hair pencil dipped in tincture of iodine, and the intolerance of light is said to be removed as by enchantment. It is especially in scrofulous opthalmia and chronic granular conjunctivitis that this remedy has been used. The author states that a multitude of facts which he has observed in the opthalmic service of Dr. Uyterhoeven demonstrate its utility, and in a long article in the *Journal de Médecine de Bruxelles*, he urges practitioners to satisfy themselves of the truth of his statements by experiment.

Urticaria.—Mr. Startin, of the London Hospital for Skin Diseases, thinks (*Med. Times and Gaz.* May, 1854) that few cases of nettle-rash resist the use of quinine. Mr. Startin is accustomed to order twelve grains of quinine suspended in eight ounces of water by means of an ounce of carbonate of magnesia; a drachm of sesquicarbonate of ammonia is added to the mixture, of which half an ounce is given thrice daily. A lotion containing dilute nitric acid is used to relieve the tingling and itching, a preparation considered by Mr. Startin quite as useful as hydrocyanic acid, and much less expensive.

Water-Strapping.—Mr. Holthouse (*Lancet*, July, 1854) has derived the best results in the treatment of ulcers of the leg by substituting for the adhesive plaster of Mr. Baynton, simple wet strips of calico. The strips, being saturated with water, are applied precisely as in Mr. Baynton's method of strapping. The advantages claimed for this dressing are its innocuousness, cleanliness, cheapness, and the ease with which it may be applied or removed. The strips may be immersed in medicated solutions instead of pure water, if it is deemed advisable.

BIBLIOGRAPHICAL RECORD.

I. *A Treatise on the Venereal Disease.* By A. VIDAL (de Cassis). Translated and edited by G. C. BLACKMAN, M. D., etc., etc. 8vo. pp. 499. New York: S. S. & W. Wood. (From the Publishers.)

La Science ne se fait pas ainsi.—VELPEAU.

It would appear as if syphilis produced on the minds of modern French surgeons an influence analogous to that which it exercises on the human economy. When we think their primary, secondary, and tertiary quarrels on this subject are completely exhausted, we learn that bitter polemics have again arisen, and presently receive a supply of pamphlets representing the elements of the wordy controversies, the discordant sounds of which have hardly died away.

We are not fairly through the *syphilization* difficulty, when here another dispute about *syphilis laterte* and the *metamorphoses of the pox*, and our table is covered with papers of Gibert, Ricord, Melchior Robert, Prosper Yvaren, and who not; and rumours come to us of shrill outcries from Turin, of guttural imprecations from Waller, of Prague, and of Acton and the English set joining in the *melée*. M. Vidal is wrought up to such a pitch, that he discharges at his adversaries a full-sized octavo, which is the especial object of this notice. We have little respect for such squabbles. The strife is for triumph

more than truth; the disputants should listen to Velpeau's honoured voice, which tells them that science is not advanced by wrangling: *la science ne se fait pas ainsi.*

We have had occasion, during the past two years, to advert to the prominent syphilitic ideas, that affect the minds of foreign academicians with such malignity, and to notice, in that connection, the appearance of M. Vidal's book, and its antagonism to those doctrines which M. Ricord has made so popular with the American profession. The publication of Dr. Blackman, however, requires us, in a manner, to return to the subject, a duty which should have been discharged some months ago, of which our editorial chief has reminded us. In obedience, then, to the maxim, *Meglio tardi che mai*, and to the peremptory editorial powers, we design to devote a few lines of criticism to the work which Dr. Blackman has invested in an American dress.

In the first place, the book actually swarms with misprints, that are not noticed in a very long list of *errata*. Such morbid states as "*cholic, pustle, vulvitus* and *meutagra*," excite the reader's curiosity; he is made acquainted with anatomical novelties, such as the "*urethreo*," "*pavilion of the ear*" and "*glands*" penis. On page 90, a patient with gonorrhœa is afflicted with a "stained *liver!*" Liquorice is referred to by the abbreviation *Glycchir.*; the latinity of the formulæ generally would excite the pity of an American apothecary. Such blunders, and a host of others might be enumerated, are bad enough when only the orthography of *things* is distorted; it is worse when proper names are disfigured, in a work, too, that is stereotyped. Aretus for Aretæus, might be pardoned, but why should M. Gibert be yclept Gilbert? or Goyrand "my freind Dr. Goyraud," Lebert appears as Sibert, Segalas as Legalas, Melsens as Melseus, Mayor as Mayer; the English fare no better; we have Bernard for Barnard, Neligan for Neiligan, and Dr. Blackman's own townsmen, Drs. Bulkley and Dewees, figure as Buckley and Dewes.

The translating is equally careless. It is quite natural in M. Vidal to compare the knots on an inflamed lymphatic to the beads on a necklace (*chapelet*); what possesses the translator to say that they resemble "a stirrup?" On page 470, we are treated to the marriage of two "husbands," from which a diseased ovum and child resulted! In fact, the text abounds in inaccuracies and inelegancies;* for which, indeed,

* The following may be cited as examples of Dr. Blackman's easy and elegant style of translation:

"However, I would not absolutely deny the syphilization even of a people, for analogy, from the truth remote, sanctions its admission." (p. 42.)

Or listen to M. Vidal's graceful irony:

"In a word, we must cull, prune, strike off, polish, and *reduce to a certain measure*, all the materials of *the* science that they may fit the famous square, without *dragging its regular lines*, or *changing its solidity*." (p. 31.)

The spelling and punctuation are Dr. Blackman's, but we have italicised the felicitous phrases.

the reader is prepared by a perusal of the preface. In that ostentatious effusion, the editor announces that he purposes to add to M. Vidal's work "the views of the leading British and American syphilographers," and in the next paragraph, states that "American surgery can boast of none to whom the term syphilographer can properly apply." We are not surprised when the editor, though we believe an Englishman by birth, acknowledges farther on that he has spent sometime in the sister island.

Let us turn to more important matters. M. Vidal's book opens with an introduction of 56 pages, in which the doctrinal views of the author are summed up. We have an historical sketch, a discussion on the nature of the syphilitic virus; the comparative value of observation and experiment is estimated; syphilization and the inoculation of animals are treated of; and a large space is devoted to the question of the transmissibility of secondary syphilis. The reader who believes in the immutable laws of experiment, who cherishes Hunterian ideas, who adheres to the mathematical laws which Ricord has laid down, will meet here with precisely opposite doctrines. Some of his favorite opinions will be rudely jostled; some fairly controverted. M. Vidal undertakes to write the history of syphilis as it is, not to weave an harmonious whole. After reading his book, you are tempted to exclaim with the author; *the dawn seemed to be at hand, and now obscurity returns.* We are to be taught again, it seems, the old lesson, not to generalize too soon. Let us, *ecrivant dans le seul intérêt du vrai*, examine M. Vidal's statements, and accept whatever truths he offers thankfully, even though they are not what we wish they were.

The first section of the book is devoted to the so-called primary venereal affections. Blennorrhagia is considered first. M. Vidal attempts to prove its syphilitic nature when uncomplicated with urethral chancre, but he adds nothing to the oft-repeated arguments in support of this doctrine. He rejects the abortive treatment in blennorrhagia, but nevertheless describes carefully M. Debeney's treatment, and the methods of MM. Ricord, Gionelle, and Venot, concluding with a detailed account of his own plan of treatment, consisting in the use of general and local antiphlogistics, followed by astringents and balsams. With gonorrhœa, he groups a number of lesions which depend on it, such as gleet (or military gout, as Dr. Blackman calls it), urethrorrhagia, certain urethral sensations that he treats by compression, orchitis (arising sometimes, he thinks, from metastasis, and which he treats by incising the testicle), gonorrhœal opthalmia, and rheumatism, prostatitis cystitis, and nephritis. He establishes the existence of this last affection by a detailed case. In treating of gonorrhœa in the female, he makes

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Vidal describes the syphilis of the fifteenth century.

"It is even probable that these lesions, which at this day are called *primitive accidents*, were sometimes completely absent. For my own part, I am inclined to think that such was the case, especially since I have proved in so positive a manner, the transmissibility *of the pustular form of the syphilides of the pustular form*; indeed, at a certain period, the pustules on the skin may be transmitted from a diseased to a sound person."

some interesting remarks on intra-uterine injections, and proves that they are safe when properly managed.*

The chancre is another result of the action of the syphilitic virus, but how shorn of its honours! It is not the sole starting-point of the pox; it is even, in some cases, but the local manifestation of a general disorder. The abortive treatment, consequently, is absurd. M. Vidal prescribes the bi-chloride of mercury (Dupuytren's pills) for two months uninterruptedly. Primary bubo, also, or bubo not preceded by any local lesion, vegetations and mucous tubercles, may be vehicles of contagion, and the means by which syphilis shall invade the economy. The proofs of the primary bubo are altogether insufficient. Not so the arguments in regard to the inoculation of mucous tubercles. M. Vidal collects a mass of evidence in proof of the transmissibility of this secondary manifestation of syphilis. He first invokes authority and analogy, for which we may not care much. He then gives us his own experiments, and the results obtained by Mr. Wallace, at Dublin, M. Bonley, at Paris, and Dr. Waller, at Prague, which satisfy our legitimate demands for precision. These facts of the inoculation of mucous tubercles are positive, uncontrovertible. On the other hand, we remark that the transmission of the secondary symptom was slow and difficult, unlike the results from the inoculation of chancre.

In his second section, M. Vidal treats of "consecutive venereal disease," including therein syphilitic eruptions, affections of the mucous membrane, of the muscles, bones, iris, and certain of the viscera. Some of these affections, he has endeavoured to show, may be the starting-point of syphilis, why should they be ranked as "consecutive"? It is improper to make them transmissible by inoculation and by that "physiological absorption" on which M. Vidal is constantly ringing the changes, and about which the less that is said the better, and then to degrade them. However, M. Vidal will have nothing to do with that division into primary, secondary and tertiary syphilitic symptoms, devised by Thierry de Hery, and valgarised by M. Ricord. He proves the transmissibility of secondary symptoms, the irregularity in their apparition, and oversets that tripod.

In speaking of syphilitic ecthyma, M. Vidal states that it has been repeatedly inoculated with success by MM. Puche, Cazenave and Richet. It seems to be demonstrated, therefore, that some secondary forms of syphilis are contagious. This section contains a very interesting chapter on the blood of syphilitic patients, in which is detailed a curious experiment by Dr. Waller, of the transmission of syphilis by the inoculation of the blood of an i dividual suffering from secondary symptoms.

M. Vidal treats bubo by a method of his own. If he fails in preventing suppuration by local depletion and emollient applications, he makes numerous punctures with a straight bistoury, in preference to an

* Dr. Blackman blunders as usual: "what is to be apprehended is, that they may [not?] reach the uterine cavity." Dr. B. omits the "not." (p. 185.)

incision. He treats vegetations by excision, rather than cauterization. In consecutive venereal affections, he uses the protoiodide of mercury whenever it can be tolerated. He employs also the iodide of potassium, the iodide of iron, and cod-liver oil. He has no confidence in the preparations of gold, silver and platinum, which have been recommended in secondary and tertiary syphilis.

The third section is devoted to the venereal affections of the newborn child. M. Vidal maintains the influence of the mother or father affected with secondary or tertiary symptoms, and the reciprocal influence of the nurse on the child, and the child on the nurse. The book concludes with a fourth section on private prophylaxis and medical police, embracing hygienic considerations of the greatest utility.

Dr. Blackman aids the heavy artillery of his pugnacious author, by keeping up a running fire on M. Ricord, in a series of notes and additions. If he anticipates that either the utility or popularity of his work will be thus enhanced, he will probably find himself mistaken. His attempts to prove that Ricord contradicts himself, are founded on the discrepancies between statements made in the *Traité*, (published in 1838), and Ricord's assertions in his "Letters" and orations in 1851. It appears quite natural that an experience of thirteen years should modify a man's views somewhat; Dr. Blackman will be fortunate if any of his original ideas survive for half that length of time. On page 200, he ascribes to Ricord himself, the doctrines of the *Syphilizators*, which Ricord quotes only to refute them. We imagine that if the lively Frenchman vouchsafes an answer to his transatlantic commentator, that it will be a brief one; that he will simply mutter—*bête!*

II. *What to Observe at the Bed-side and after Death, in Medical Cases.* Second American from the second London edition. Philadelphia: Published by Blanchard & Lea. (From G. M. West.)

The title of this work gives us at once an idea of its object. It is designed to suggest to the medical attendant, the proper subjects for observation and enquiry, in the management of the sick under his charge.

We may truly say that the physician who faithfully carries out all of the requirements of this book, in his examination of his patients, will have but little time left to cure them. We have taken pains to notice how many observations and enquiries are necessary, in order to obtain all the information here laid down as proper to be arrived at, and we are within bounds when we say, that they are considerably over *five thousand.*

Imagine an unfortunate victim of some acute inflammation, undergoing the slow operation of this worse than Spanish Inquisition, and we can at once perceive that long before this accurate and scientific examination has been brought to a close, death has kindly come to his

relief, and his spirit has departed to that better country where the weary are at rest.

The authors of this book seem to have anticipated this sad termination of their learned labors; for, after telling us what to observe at the bedside, they proceed at once, by a natural sequence, to enjoin upon us the method of examining the dead body of our poor patient, and propose about five thousand more observations in order that we may ascertain the exact cause of death. We very much fear, however, that the coroner's inquest would not require this careful analysis, to enable them to render their verdict, and the friends of our deceased patient might, with some propriety, bring an action against the "London Medical Society of Observation" for damages.

III. *Medicine a Science; or, Disease a Unit.* By H. BACKUS. Pp. 46. Selma, Alabama. 1855. (From the Author.)

The writer of this little pamphlet, which is an amplification of an essay published in the *Transactions of the Alabama Medical Association*, for 1852 and 1854, is convinced that the period has arrived for broad generalizations in medicine, and he proceeds on this conviction with the most amazing coolness. He modestly proposes to accomplish for medicine what Newton accomplished for astronomy (we quote his own language), which he takes to be the binding together of individual facts *into one great whole*, and the reference of all phenomena to a Common Cause! That such vagaries should find their way into print is perhaps not astonishing, but that they should be reproduced on two several occasions, is a queer phenomenon, to which we have thought proper to call attention.

EDITORIAL AND MISCELLANEOUS.

Dr. Nathaniel Chapman.

The admirably executed engraving, and perfect likeness of the late Dr. Chapman, which forms a frontispiece to this number of our Journal, will excite in the bosom of many of our readers, emotions of the most varied character; recollections both sad and joyous. Throughout the broad limits of our state, in every town and hamlet, in many a secluded nook, by many a quiet fireside, there are those, who after the lapse of many years, look once more on that well remembered face, and as the old pupil silently gazes on the characteristic features of his revered and much loved teacher, how the memory of the past comes rushing on the mind.

> "Lulled in the countless chambers of the brain,
> Our thoughts are linked by many a hidden chain.
> Awake but one, and lo! what myriads rise,
> Each stamps its image as the other flies."

The memory of college days,—how vividly each scene of that eventful period is now before us; that thoughtless, happy time, when with a buoyant leap we passed the rubicon of life, and boldly plunged into the stern realities of manhood.

The student life at home, our country home; those old books, from whence we derived the first glimmerings of that science to which a lifetime has been devoted; Cullen's First Lines, or Wistar, and most beloved of all, eloquent old Richerand; or, it may be, the imperfect yet useful instructions of our honored preceptor, over whose grave the grass has been growing for many a long year; we remember it all as if but yesterday. Then the departure to college, the excitement of the journey, the strange novelties around us—for every body did not travel everywhere in those days—and at last we approach our destina-

tion. We see before us the venerable walls of the "old school," and feel again the solemn awe creeping over us as we enter its doors. How desolate and strange all seems, and how we long for one cordial, home like word of greeting to cheer us on our way. 'Twas there we first beheld this face; the same, save that inexorable age has marked the brow with many a deeply graven line; we feel the affectionate grasp, and that peculiar voice, so frank and hearty, still rings upon the ear. Glorious "old Chapman," you stand before us now. Always courteous and polite, your Virginia heart overflowed with affection for those who proudly claimed you as a countryman; for them you reserved your deepest sympathies, your most earnest good wishes; and now, when after long years, we look upon your face once more, we forget the lapse of time, the storms and struggles of life, the cares and vexations of our arduous calling, and once more we are boys again, living over in pleasant reminiscences, our college days.

It is not for us to write the biography of this eminent man. Abler and better hands have executed that sacred duty. We need not tell the Virginia profession, almost every member of which has held towards him the intimate relation of pupil and instructor, of his many admirable qualities of head and heart. They know how instructive were his lectures, how animated his gestures, and how eloquent his language. His abilities as a teacher and his virtues as a man gave him the most unexampled popularity with his class, whilst his admirable judgment and readiness of resource made him, beyond dispute, the great physician of his day. In the social circle he shone pre-eminent, and his conversation ever overflowed with sparkling wit and gay repartee. But more than all this, his heart was true and noble, free from petty jealousies and ambitions, and frank and honest was his nature. Had he faults? "Even his failings leaned to virtue's side," and none more ready to acknowledge an error or repair a wrong.

Such a man was Nathaniel Chapman. Virginia may, with pride, enroll his name as one of the worthiest of her sons, as one whose heart ever yearned to his native country with the fondest love; and now, when his earthly career is ended, and the grave has closed over his mortal remains, let us not delay to offer our last tribute of respect, to weave a chaplet, however simple, to his memory.

Surgical Novelties.

The rush after "Novelties" so characteristic of the Medical periodicals, each vieing with the other to be first in the field, often results in such blunders as the one we are about to relate.

The *Charleston Medical Journal* copies, under the head, "Novel Mode of Opening an Ovarian Cyst," an article from the *American Medical Monthly*. A journal conducted by an entire corps of "professors," as is the case with the last-mentioned work, should be better posted in the history of surgery.

"Dr. [Marion] Sims," the narrative runs, "has recently performed this operation in a mode *which is new*, and which seems to possess several excellencies. A trocar, fifteen inches in length, curved so as to be the arc of a circle of four and a half inches radius, was, with its canula, inserted at the usual place of tapping in abdominal dropsy. After a portion of the fluid was drawn off, the point of the trocar was drawn within the canula, which, after several attempts, was finally carried to the cul-de-sac, between the uterus and rectum; and when felt by the finger in the vagina, the trocar was again protruded, the sac and the vagina perforated, and the extremity of the canula brought out between the labia majora; thus, in fact, transfixing the patient. A self-retaining catheter was then attached to the canula and drawn into the ovarian sac, when, being separated from the canula, it was secured within the sac. The canula was withdrawn and the external opening closed. In this way the contents of the cyst were allowed to drain entirely away, and it is hoped that obliteration of the sac and the cure of the patient will be the result. At our present writing, nearly three weeks after the operation, she is going on well."

If the reader will refer to the *Revue Médicale* for 1839, (Vol. i, p. 19) he will find a description of the above "novel" operation. Or, if this is not convenient, he may turn to Chelius' Surgery, where he will meet with the following sententious paragraph:

"Here also must be noticed RECAMIER'S mode of treatment; the swelling is emptied with a flat trocar, the canula thrust into the blind end of the peritonæum, till it is felt in the vagina, into which it is thrust, and an elastic tube introduced. The result was fatal."! (*Loc. cit.* p. 210, Vol. iii.)

And so "it is hoped that the obliteration of the sac and the cure of the patient will be the result?" Ah, well! The subject of this operation "may be born for good luck," but at any rate let the old Frenchman who killed his own patient, have the credit of suggesting the treatment, which has resulted in the cure of another.

A New Stethoscope.

Dr. George P. Cammann, of New York, has recently invented a "double self-adjusting stethoscope," which is supposed to possess the following advantages: 1. That it excludes all external sounds; 2. That it leaves the hands of the examiner free; 3. That sounds conveyed through it are increased in intensity, so that sounds which are doubtful by ordinary instruments are made certain, and sounds not heard through instruments in common use, can be detected. This instrument consists of a bell-shaped extremity connected with two tubes, which are inserted into the ears. It is figured in the *N. Y. Medical Times*, and manufactured by Mr. Tiemann. There was once a countryman, ignorant of the alphabet, who was induced to purchase a pair of spectacles because they were recommended at the optician's doorway by the announcement of "Helps to read." Persons unskilled in the art of physical diagnosis may perhaps essay this new *aid to auscultation*, and meet with a disappointment analogous to that of the countryman. Physicians who correctly appreciate the value of mediate and immediate auscultation, who regard the stethoscope simply as an instrument which may be applied, more readily than the ear, to some portions of the body, have never felt much interest in the innumerable pretended improvements of this instrument. We venture to predict that, notwithstanding the high authority by which it is recommended to the profession, the "Cammann Stethoscope" will share the fate of its predecessors. C. E.

Contagion in Cholera.

It is an incontestable fact that a belief in the contagiousness of cholera has been steadily gaining ground during the progress of the last epidemic. Dr. Latour, of the *Union Médicale*, who has laboured nobly in behalf of the measures adopted in some parts of France for the prevention of cholera, admits, while lamenting it, that many eminent physicians in France have recently become converts to the doctrines of the contagionists. Among these, there is none whose opinion is entitled to more weight, or whose opportunities for observation have been more extensive than the celebrated Michel Lévy, the Medical Inspector-General of the expeditionary army of the East.

VARIETIES.

REVACCINATION IN PRUSSIA.—One of the regulations of the Prussian Army requires the vaccination of all new recruits. This practice furnishes incontestable evidence of the progressive diminution in the protective power of vaccinia. In 1853, there were 44,652 revaccinations. Of this number 32,642, were performed on recruits who presented plain cicatrices; in 7,643 cases, there were slight marks; in 4,367, cicatrices were entirely wanting.

Revaccination caused a regular eruption of vaccinia in 28,329 individuals, an irregular eruption in 5,933, and failed completely in 7,664. Revaccination, therefore, is successful in 69 cases in 100. Dr. Hope has compared these statistics with the results of revaccinations during the last twenty years. It will be seen from the following table that the proportion of cases in which revaccination succeeded has annually increased.

Years.	No. of successful revaccinations in 100 recruits.	Years.	No of successful revaccinations in 100 recruits.
1833,	33	1844,	57
1834,	37	1845,	58
1835,	42	1846,	60
1836,	46	1847,	64
1837,	49	1848,	64
1838,	50	1849,	64
1839,	51	1850,	61
1840,	54	1851,	64
1841,	57	1852,	69
1842,	58	1853,	69
1843,	57		

These figures speak for themselves, and need no interpretation.—*Translated from the Bulletin de Therapeutique*, May 30th, 1854.

TO PREVENT THE SPONTANEOUS DECOMPOSITION OF URINE.—It is often the case that delay unavoidably takes place in the examination of the urine of persons under medical treatment. Under such circumstances, in order to prevent the spontaneous decomposition of the urine, BAYARD, *Notizen aus dem Gebiete der pratischen Pharmacie*, proposes the addition of coal tar naptha in the proportion of six drops for each pound, or a larger quantity of coal tar. The urine may then be evaporated to dryness in the sun without decomposing.

MEDICAL ATTENDANCE ON SERVANTS.—The Dublin Medical Press, August 23d, records a very interesting trial that recently took place in Mildenhall Co. Court, England. It was an action instituted by a surgeon against a gentleman for recovery of £11 0s. 6d., the amount of his attendance on said gentleman's housekeeper, who had broken her leg. It was clearly proved in evidence, that

the plaintiff had been sent for by the defendant, to visit his (the defendant's) servant; and his Honor laid it down as clear law, that if a master sent for a doctor he was liable to pay for the attendance. Not only in law, but in justice, did he consider the defendant liable; for he considered it very hard that medical men should not be paid when they are at the beck and call of any person who may may choose to send for their assistance; and if they refuse to go, they became subject to a general outcry throughout the country for their want of humanity and Christian feeling. He therefore considered the plaintiff entitled to his claim for the whole amount, with costs.—[*The Medical (Montreal) Chronicle.*

The Ether Case at Lynn.—At the coroner's examination in the case of the death of Mrs. Mary Farley, of Lynn, caused by ether administered by Dr. Davis, a dentist, it was shown that Mrs. Farley had urged and persuaded the doctor, against his expressed wishes, to administer ether to her while he removed a tooth. Dr. Davis gave her one and-a-half ounces of ether, which was less than the usual amount. She exhibited no unusual symptoms until he attempted to open her mouth, when he discovered that her jaw was fixed. He immediately turned water upon her, fanned her, and resorted to every method to restore her to consciousness; but she died in about seven or eight minutes. The coroner's jury returned a verdict that "her death was caused by a congestion of the lungs, consequent upon the inhalation of ether administered by Addison Davis. In returning their verdict, the jury wish to express their sense of approval of the course adopted by Dr. Davis in using every precautionary measure."—*Journal.*

A Degree Conferred.—At the commencement of the Jefferson Medical College, held on the 10th inst., the honorary degree of LL. D. was conferred upon the Hon. Chief Justice Lewis. From the fact that Judge Lewis is President of the Faculty and Board of Corporators of the Philadelphia College of Medicine, it may be regarded as significant of the appreciation entertained by the former of its young and vigorous competitor. It also presents a cheering assurance of the kindly and cordial feelings subsisting between the members of the medical institutions of our city.

We are requested by the publisher of the Upper Canada Journal of Medical, Surgical, and Physical Science, to state that in consequence of the absence from Canada of the editor, Dr. Stratford, the publication is discontinued for the present. The No. for Sept. 1854 completed the volume. Exchange journals and papers will please take note of this, and discontinue sending their respective publications.

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MEDICAL AND SURGICAL JOURNAL.

MAY 1855.

ART. I.—*On the Pathology and Treatment of Typhoid Fever.** By CHAS. WM. ASHBY, M. D., Alexandria, Va.

An imperishable debt of gratitude is justly due to the illustrious Louis, for having first applied to the investigation of disease those searching principles of inductive philosophy which have been so eminently successful in all the other departments of science. The publication of his great work on phthisis in 1825, and subsequently his researches on typhoid fever, commenced the dawn of a new but glorious epoch in medical science, and it is truly a subject of congratulation that, in this age of excitement, of progress, and scientific acquirements, unparalleled in the history of the world, our profession is not lagging behind. Not content, as formerly, with receiving by *faith* the dogmas of the schools, the mere theories and speculations of ingenious minds, we have now in the broad field of scientific research a host of brilliant intellects, who would compare well with any other profession, and who are patiently and yet anxiously enquiring in the language of inspiration, "what is truth?" Louis, not content with grouping together the ordinary and most common symptoms of typhoid fever, and study-

* Being extracts from a lecture delivered by Dr. Ashby before the Medical Society of Culpeper county in the year 1852.

tations to the abdomen, acquired far more reputation in the treatment of this disease than all the M. D's together.

Typhoid fever is usually ushered in with a chill, more or less distinct, succeeded by a hot and dry skin, but sometimes moist.

The pulse is usually accelerated, rather soft and feeble, but not always so. Great muscular debility ordinarily is present, but this is not observed more frequently than in other forms of fever. Pain in the back and limbs are sometimes present but not uniformly so. Headache is usually present, and is said to be more constantly so than in other fevers, but this cannot be a characteristic, as it is a very common symptom in all acute affections.

Bleeding at the nose is mentioned as a symptom, but it is so frequently not present, that it cannot be relied on as of much value. Diarrhœa and tympanitis are frequently but not always present. Looseness of the bowels and great susceptibility to the impression of cathartic medicine are of more importance, as they hint at the condition of the intestines, but it is obvious, that *alone*, they cannot be relied on. The appetite is very variable, but usually, in typhoid fever the patient *retains* his appetite better than in other fevers.

The mouth is usually clammy and dry, the tongue at first has usually a thin whitish fur, but most frequently it is rather yellowish. The tongue itself is sometimes tremulous, and difficult of protrusion, with occasional redness of the edges. These symptoms and others, which are sometimes present, but not sufficiently so to be regarded as at all characteristic, *vary* greatly during the progress of the case, modified no doubt by each particular constitution, and by the climate or season of the year at which the disease is prevailing. The sudamina and rose coloured spots described by writers, and by some considered characteristic or pathognomonic, we have rarely seen, and this has been the experience of all the physicians in this and the adjoining counties. But if they were generally present, it is conceded that the spots could not be detected upon a coloured person, which portion of our population is rather more subject to the disease than others. Our experience only confirms that of all the best writers upon the subject, that this disease not unfrequently comes on *so insidiously*, so slowly and gradually, for the first week and sometimes for two weeks, that it is very difficult to ascertain, either from the patient or his friends, the precise day he first complained. He is languid and dull but still attends to his business,

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VIRGINIA

MEDICAL AND SURGICAL JOURNAL.

MAY 1855.

ART. I.—*On the Pathology and Treatment of Typhoid Fever.** By CHAS. WM. ASHBY, M. D., Alexandria, Va.

An imperishable debt of gratitude is justly due to the illustrious Louis, for having first applied to the investigation of disease those searching principles of inductive philosophy which have been so eminently successful in all the other departments of science. The publication of his great work on phthisis in 1825, and subsequently his researches on typhoid fever, commenced the dawn of a new but glorious epoch in medical science, and it is truly a subject of congratulation that, in this age of excitement, of progress, and scientific acquirements, unparalleled in the history of the world, our profession is not lagging behind. Not content, as formerly, with receiving by *faith* the dogmas of the schools, the mere theories and speculations of ingenious minds, we have now in the broad field of scientific research a host of brilliant intellects, who would compare well with any other profession, and who are patiently and yet anxiously enquiring in the language of inspiration, "what is truth?" Louis, not content with grouping together the ordinary and most common symptoms of typhoid fever, and study-

* Being extracts from a lecture delivered by Dr. Ashby before the Medical Society of Culpeper county in the year 1852.

ing the disease as a whole, instituted the most careful and rigid investigation of each symptom, its frequency or absence, its relative importance, its combinations; and then, by accurate analysis, sought to know what were the true elements which entered into, and constituted this disease. By this slow, yet only philosophical mode of investigating and eliciting truth, a complete revolution has been effected in regard to our knowledge of this disease—so much so, that all the books written on fever, previous to his time, are now obsolete. Louis demonstrated by his patient and laborious researches, that a peculiar lesion of the small intestines is uniformly present, and constitutes the essential characteristic and pathological element of the disease.

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he seems to be neither sick nor well, but "droops" as Watson very properly describes it.

Ordinarily such a case as this would scarcely attract the attention of either the friends or physician, but in a few days more he is very ill, and you are hurriedly summoned to attend a hopeless case, for it is a very remarkable fact that such cases as these very commonly prove fatal, *suddenly* and unexpectedly. Many of us must have experienced the deep gloom and painful solicitude which must ever rest upon the mind of a thinking man, when such a case as this has occurred to him, about which he has doubts as to the true nature of the disease and the cause of the sudden death, and we must all acknowledge that a majority of symptoms usually present, and mostly relied upon as characteristic of this disease may be absent in any given case, and yet the disease be present, and *vice versa.*

The uncertainty of the symptoms already alluded to, show the value of an accurate knowledge of the nature and pathology of this disease, the liability to mistake, and the fatal error of not early recognizing the typhoid epidemic, and we will present one or two illustrative cases to prove, that it is of the highest importance that every physician should avail himself of the *earliest* opportunity practicable, of making post mortem examinations, whenever he has the slightest reason to suspect the existence of the epidemic.

The first case which we select from among many others is one which occurred in the practice of an intelligent friend, Dr. Holliday of Orange County. This case is mentioned not only because it illustrates the subject, but because it has another point of interest. A young able bodied coloured man was complaining about a week or ten days, but not sick enough to induce the master to think anything serious was the matter with him. He walked about occasionally and attended a little to business until the day the physician was sent for; he was taken suddenly with a pain in the bowels, and the doctor found him with a small, rapid pulse, tympanitis and great tenderness and pain of the abdomen, with excessive prostration. He died on the second day thereafter.

His physician with characteristic honesty candidly confessed, as well he might, that he had no clear idea of what caused the death of his patient. A post mortem examination revealed ulceration of the bowels and perforation, through which a large lumbricus had passed into the peritoneal cavity. Was this a case of typhoid fever? Dr. H. now thinks it was, and from its pathology, connected with the history, there can

be no doubt of the correctness of his opinion, although the dissection was not as extensive, and as complete, as could have been desired. If so, was not the autopsy or examination of the utmost importance in arousing the attention of the physician and family to the fact that this terrible disease was in their midst.*

We would here ask: Did the worm complete the perforation?

The second case which we present occurred in our own practice. A coloured man, about 25 years of age, had been complaining for about two weeks, but he could not say precisely how long. He had slight head ache, uneasiness in his bowels, and weakness in his back and limbs, but he had not thought enough of it either to lay by, or inform his master of his indisposition. The day after he was confined to the house, we saw him, and learned from the family that the night before he was taken sick he walked several miles to his wife's house, and returned about day break, and that they attributed his sickness to cold or exposure, but the boy insisted upon it that he had not been well for some time past, and that he had made himself much worse by eating a good many chesnuts a few days before. His pulse was soft but very rapid, skin moist and pleasant, slight diarrhœa, tenderness over the abdomen; his tongue was moist and slightly furred with a yellowish coat; he had a slight hacking cough, with some acceleration of the respiration; he had an anxious countenance and depression of spirits, complained of great weakness, but still walked about the room.

At the second visit there was no great change in the symptoms, rather worse if any thing. His pain in the bowels increased, and had more tympanitis. The physical signs of pneumonia were now present.

At the next visit we were amazed to find the patient dead. We learned that the swelling and pain in the bowels greatly increased. He continued to walk about the room until a few hours before his death.

The *post mortem* exhibited most strikingly the peculiar pustular eruption or ulceration of the glands of the intestines, as described by Louis, Chomel, and all subsequent writers upon this subject. There were marks of pneumonia, but this man died of perforation of the bowel, and peritoneal inflammation.

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* Naturalists tell us that this species of worm does not possess the power of boring; it is, therefore, probable that it merely passed through the perforating ulcer.

Typhoid fever resembles in so many important particulars the exanthemata or irruptive diseases, such as small pox, scarlatina and measles, that it has been maintained with great plausibility that it belongs to this class. Like these it prevails epidemically at all seasons, and in almost all latitudes; like these it is limited, or runs usually a particular course, and terminates favourably, or else fatally, generally in consequence of some unfortunate complication or local determination to a vital organ. Like these, when convalescence is fully established, your patient is not liable to a relapse, and usually is ever afterwards exempt from an attack. An individual recovering from measles, small pox or scarlatina, may be lost from some imprudence, or from the natural effects or sequences of the disease, but the irruption once faded or passed off, does not return again, and so of this disease. The analogy holds good also in the fact, that as in those, so also in this, you not unfrequently lose your patient suddenly, unexpectedly, and often unaccountably. And finally, it is impossible for any one to decide, with absolute certainty, in regard to any single isolated case of either of these diseases, until the peculiar eruption is seen. So of typhoid fever; the pustular irruptions of the intestines is as constant and as peculiar a characteristic of this disease, as is the irruption of small pox, measles or scarlatina.

There is one other difficulty to which we will allude very briefly, and that is the blending or intermingling of the types of fever. A paper upon this subject by the distinguished Prof. Dickson of Charleston, S. C., was read before the American Medical Association at its session in Richmond, and as it is a subject of great importance, we take the liberty of commending the paper, now published, to the careful consideration of the profession.

It not unfrequently happens that at the commencement or going out of any particular epidemic, cases of fever of a very different grade or type will be found to exist not only in the same neighborhood but in the same family, and sometimes even mixed up in an individual case. This fact, not properly understood or appreciated, often leads to unfortunate discrepancies of opinion and practice. During the summer preceding the fall of the first appearance of typhoid fever in this community, intermittent fever, a most unusual thing in this region of country, prevailed extensively along on the borders of the Hazel river. In many cases of typhoid fever, the intermittent type was so well marked, and so much benefitted by the use of quinine, that we had

well nigh embraced the theory and practice of our southern and western brethren, viz: that all fevers are intermittent, except that some are so slightly so as not to be perceived or appreciated, and that quinine was the great remedy. During the progress of the epidemic, however, there was abundant reason for discarding this theory, and yet it can be easily understood why it is that southern and western physicians, and those living in regions of country infested by intermittent or malarious fevers, should embrace and defend it with so much zeal.

In those portions of country where fever and ague prevail annually, it is a remarkable fact, that nearly all the diseases of the country almost constantly partake of the intermittent type. But here, where this form of fever makes only an occasional visit, we were enabled to see one epidemic lingering, as it were, in the lap or embraces of another.

We come now to consider briefly the causes of typhoid fever, a point of the greatest obscurity and difficulty. The cause of fever has been a subject of much speculation and research, and though the best talent of the profession has been enlisted, the cause of truth and honesty demands that we should make the confession (painful though it be) that little or nothing as yet that is satisfactory, is known in regard to this subject. After the first question, what is the matter, is disposed of, the next question generally is, what caused the disease. The human mind, painfully anxious to satisfy itself upon this point, in all ages, has been found not unfrequently to attribute events to wrong causes, and to this source may be traced many of the grossest errors and superstitions, which have not only connected themselves with our profession but all the other departments of life.

The early writers assigned as the cause of fevers the influence of meteors, volcanoes, earthquakes, moisture, &c. But for centuries past, vegetable and animal decomposition or malaria has been and is now the favourite theory of most of the profession. But this dogma cannot stand the searching scrutinising investigations of inductive philosophy, and is therefore destined soon to pass away. The theories of electricity and animalcular origin of fevers, have now but few advocates. Dr. J. K. Mitchell, the accomplished and distinguished professor of the theory and practice of medicine, in the Jefferson Medical College of Philadelphia, has recently published his lectures upon what he terms the cryptogamous origin of malarious and epidemic fevers, which have attracted no little attention. This novel theory of Prof. Mitchell is to my mind

one of the most ingenious and plausible which has yet been promulgated, and Professor Bailey of West Point, one of the most scientific men of our age, expresses the opinion that the author had made out a very strong case.

Though Prof. Mitchell has failed, in our estimation, to establish his own theory, the profession is under the highest obligation to him for refuting most completely and triumphantly this long received dogma of miasm, and though we are again afloat upon the wide field of investigation; to learn our ignorance and to refuse our assent to error, is an important step in the search after truth.

Why, we ask, has there been so little speculation upon the subject of the cause of hooping cough, measles, scarlatina, small pox, and yet so much upon the subject of typhoid fever.

Why is it that more is demanded of us in regard to causes than of other professions? Would it not be folly in the extreme to adjudge the machinist ignorant of his trade or less qualified to repair any derangement or breach, because he may not know the precise cause which threw the machinery out of plumb or cause some screw to be loose? Would the lawyer be less qualified to afford his client the profit of his professional skill because he did not know the certain influences or causes which got him into his trouble?

Sir Astley Cooper was once asked, by an inquisitive fellow, why some persons could have small pox twice. His reply was, he would be very glad if he would tell him why they could have it at all.

All that we know of this matter is, that it has been so ordered or arranged that the whole human family are susceptible, once during life, to the influence of certain diseases, such as hooping cough, measles, scarlatina, small pox, and we will add typhoid fever, and few if any ever escape this doom.

Is typhoid fever then a contagious disease? This is a question which has ever excited the most anxious enquiry and investigation of the profession, and yet candour compels us to admit that it is still involved in great doubt and obscurity. The weight of authority is very equally balanced, and the ablest writers on the subject have, on either side, adduced facts, equally plausible, and apparently equally well authenticated. On the one hand, by those who deny that it is contagious, it is maintained with great confidence that very many persons are exposed to the disease, under all circumstances, and yet never contract it; on the other, it is alleged with equal truth that nurses, physicians

and friends visiting persons labouring under this disease, do not unfrequently contract the disease, and on returning, even to distant homes, communicate it to whole families and neighbourhoods. To reconcile these conflicting circumstances or facts, within the observation or knowledge of every physician, the most ingenious speculations or explanations have been resorted to by either party.

Recent observation and reflection have suggested a theory, which has at least the merit of originality, and with diffidence we present it for the consideration of the profession, trusting that in some degree, it may serve to illustrate this very obscure subject. We think that typhoid fever is a contagious disease and that all persons are not only susceptible to it, but that most persons do contract it at some period of their lives, and yet very many have it so mildly that it is never recognised as typhoid fever either by themselves, friends or physician, and still the system is ever afterwards protected, just as the vaccine disease protects an individual from small pox. If these views be correct, the universally admitted fact that very old persons are not liable to contract this disease, is of easy explanation. This theory also harmonises or reconciles the opposing facts of the two contending parties, and explains why it is that very many persons are exposed to the disease and yet apparently do not contract it, and why others similarly exposed do take it.

Louis speaks of a latent form of typhoid fever in which extensive local intestinal lesion had been demonstrated to exist, without the usual rational symptoms ever being present in the slightest degree. Bartlett, Wood, and most other writers upon the subject mention a form of this disease, so very mild as to be scarcely appreciable, and our observation leads us a little farther, and induces us to believe that during the prevalence of the typhoid fever very many cases of the disease occur, but with such slight disturbance of the system as not to attract attention, or if they do they are not regarded as cases of fever. Slight headaches, lassitude and a general indefinite not being well, we have remarked as very common in families and neighborhoods where this disease is prevailing. At this time also such symptoms as usually indicate irritation of the mucous membrane of the alimentary canal, have been very frequent in persons scarcely complaining at all. The most constant of these is enlargement of the upper lip or swelling or puffiness just where the outer cuticle of the skin unites with the inner. We have not seen this

symptom mentioned by any writer, yet we have long been in the habit of regarding it as one of the most constant indications of worms, and it is rarely, if ever absent even in the slightest cases of typhoid fever, and mild cases of this disease have not unfrequently been mistaken for worms.

Have we not all seen one or two well marked cases of scarlatina in a family, and at the same time very many other cases which never would have been recognized as scarlet fever, but for the fact that it was known that the disease was present; and we all know the fact that scarlatina assumes every phase of disease, from the highest degree of malignity to the slightest inappreciable disturbance of the system.

We frequently recognize the scarlatina rash of the throat in children, scarcely complaining at all, and observation has satisfied us that there is a certain inappreciable scarlatina disturbance of the system, which does ever afterwards protect the individual. Again and again we see the peculiar characteristic sequelæ of scarlet fever in children when no previous disease whatever had been observed. This fact demonstrates that persons do have scarlatina without the rational signs, and accounts for the fact that so many children are supposed never to have had the disease, whilst it is a fixed law that all are susceptible to it. No one will deny the correctness of these observations in regard to this disease, and we hold the same to be true in regard to typhoid fever. If scarlet fever be epidemic in its origin, and now admitted to be contagious in its character, so we maintain is typhoid fever. We ask the attention of the profession to the analogy which exists between the exanthematous and typhoid fevers, because it is possible that, if typhoid fever was more carefully studied from this point of view, more accurate knowledge of its character would be had.

Let us now direct our attention to the principles upon which the treatment of typhoid fever is based. This disease, like all others, must be treated on general principles, for he who has any particular plan of treatment or particular remedies, must inevitably commit the most egregious and fatal blunders. The treatment of the mere names of disease has ever been, especially with the younger members of the profession, the source of the greatest errors in practice, and in a very high degree gives currency, and even aid and comfort, to that miserable system of quackery, which is flooding the country with compound syrups, pills and panaceas If Dr. A, B or C has certain remedies, or formularies for certain diseases, which he extols to the skies, and

boasts that he could have cured a certain case, which he never saw, and proclaims that such a thing is good for such a thing (and it may be that, either directly or indirectly, he sometimes proscribes the panacea of the latest date), how can it be otherwise than that the people, naturally credulous and superstitious, and especially so when sick, should continue to be duped and swindled by villainous impostors who generally steal the title of Doctor, and publish certificates often wholly fraudulent, but commonly given by their most ignorant patients.

We should ever keep constantly in mind the pathology of this disease, namely, that it is essentially a disease of the glands of the intestines, more or less extensive, with a tendency to ulceration from the seventh to the thirteenth day, and that like the exanthematous or irruptive diseases, it is self limited in its course, though its period of duration is not so well marked as these.

The first important question to be decided is, is it an inflammatory disease, and if so, what is the character of the inflammation? Now we know that there are inflammations of very different characters, and require to be treated very differently. For example, the inflammation of scrofula is very different from that of acute pleurisy or pneumonia. The one tends constantly to ulceration and suppuration, and the other to the throwing out of coagulable lymph, and the taking on of adhesion and disorganization. In pneumonia, pleurisy, and indeed all inflammations of this phlegmonous class, it has been demonstrated that there invariably exists in the blood a superabundance or an excess of fibrin. This excess of fibrin in the blood is always increased in proportion to the intensity of the inflammation.

Andral, after a most careful analysis of the blood of a large number of pure, uncomplicated cases of typhoid fever, ascertained positively (and his experiments have been confirmed by others) that this fibrin or plastic organizable portion of the blood was constantly diminished, or less than the healthy or natural quantity, and that this diminution was invariably in proportion to the intensity of the case. With these incontrovertible facts before us, it is easy to decide that there is a very marked difference between the inflammation of pneumonia, pleurisy, &c., and the inflammation of the gland of the intestines. We now take one step farther, and assert the well established fact that in all cases, where the excess of fibrin exists, it is of the last importance to our patients that they get rid of it as soon as possible, and therefore

we extract blood and take away the excess of fibrin, and all enlightened experience confirms this practice as the "sheet anchor of hope."

On the other hand, in all cases where this diminution of fibrin already exists, the abstraction of blood increases this condition. Now, with these views and facts, we have no difficulty in deciding unhesitatingly that the abstraction of blood is not applicable in the treatment of a simple, pure, uncomplicated case of typhoid fever, and at this day, upon this point, there is no difference of opinion among the scientific members of the profession. By the same facts and same process of reasoning we have no hesitation in excluding mercury (at least so far as its constitutional effects are concerned) in the treatment of this disease in its simpler forms. What is the principle upon which we administer calomel or mercury in any of its preparations? We know that mercury, next to the abstraction of blood, is the most important remedy we possess for getting the blood rid of the excess of fibrin—that, somehow or other, it dissolves or destroys it. As a very large proportion of the inflammatory cases to which we are called contain this principle in excess, we see why and how it is susceptible of such extensive application in practice. On the other hand, there is no fact better established than that, in all cases where diminution of the fibrin exists, the administration of mercury increases this condition, and thus great mischief is often done.

We have reason to believe that this remedy, valuable as it is in the hands of scientific men, has often been greatly abused, as there is not a doubt but that, injudiciously used, this impoverished state or want of fibrin in the blood has been not unfrequently produced by it.

By the same process we exclude purgatives, as they are antiphlogistic or aid us in getting rid of the excess of fibrin, and consequently, in this disease, they not only increase the already irritated state of the bowels but contribute greatly to the prostration of our patient. We often see this class of remedies, valuable and extensive as is their application in practice, greatly abused, not only in the treatment of this disease but others of a kindred nature.

We therefore believe, that like hooping cough, measles, scarlatina and small pox, typhoid fever is a self-limited disease, and that, like them, you cannot cut it short by remedies, and that in its mild, simple form, all meddlesome, officious interference by friends or physician, with the natural efforts of the system to throw off the disease, in its own time, and in its own way, are not only useless, but often hazardous.

This is not a popular doctrine. The people, like the Assyrian king who went to the prophet to be healed of his disease, have not faith because the prescription is simple; they expect you should do some "great thing," and make some great parade; it may be, tell of the extraordinary miracles you have already wrought. It is to this principle of human nature that quacks and charlatans appeal with so much success.

But how would you treat a simple but well-marked uncomplicated case of typhoid fever?

Make your patient comfortable in every way possible. Have him thoroughly cleansed, especially if he be a coloured person. Keep him as quietly as possible upon a good bed, in a well ventilated room, if in summer; if in winter, guard him from a draught of cold air, and separate him from the other sick. Regulate his diet, give him mild but nutritious articles of food. The subject of diet is a most important one. There is a very common mistake or error committed in starving our typhoid fever cases too much. Remember the condition of the blood, the want of the important principle of fibrin, and the propriety of giving a sufficient supply of good, wholesome, digestible food, will at once appear evident. We starve our patients with inflammations characterized by an excess of this fibrin, and thus aid our antiphlogistic remedies by withholding the supply; while on the other hand, in scrofula and kindred diseases, we give food and thus aid in supplying the demand or deficiencies. We have long been satisfied that our patients, with all diseases, are often greatly injured by being constantly teased with all manner of slops and teas. We know that the human stomach, for the healthy performance of digestion, needs a certain period of rest, and custom and experience have established three times a day as the proper period of interval. And we all know that he who continues for any length of time to violate this law of the animal economy, by constantly taking food, however little, and thus frequently interrupting the process of digestion, will, sooner or later, if he have not extraordinary powers of digestion, pay the penalty with a broken down or enfeebled constitution. If this practice be injurious in health, how much more so must it be when the organ is already enfeebled by disease. The digestion of children or infants is much more rapid than that of adults, and therefore food more frequently is allowed. If proper attention is paid to diet, giving a sufficient quantity of nutritious food at regular intervals of three times a day, letting your patients

have occasionally solid food, even mutton chops if desired, (for the act of mastication is of importance,) you will find that your patient's appetite will be better kept up, his strength better sustained, and he will be less liable to diarrhœa. And finally, not being reduced so low, he will not suffer so much during convalescence for nutriment, which is so annoying and distressing, and when gratified often productive of such hazardous consequences. With these views properly applied, in an uncomplicated case of the disease under consideration, we may do more to aid nature (for that is all that any one ought ever to attempt) in relieving herself, than we can accomplish with all the drugs of the apothecary shop together.

But let us ever keep in mind the fact that in typhoid fever we have a most subtle, insidious, and deadly foe to contend with, in consequence of the constant tendencies to local determinations or complications with other and more vital organs. What is the cause of this tendency, so frequently met with and so constantly the cause of our patient's death, is a question yet unsettled. The treatment of typhoid fever under these circumstances becomes altogether a different affair, and no disease whatever requires more judgment and more accurate and scientific knowledge of physiology or the laws of animal life in health. He who keeps in mind the most accurate knowledge of the standard of health and the functions of the different organs, will be best able to detect the slightest deviation therefrom, and thus at the earliest possible moment to decide that the disease is not pursuing its natural course, but that some other organ has become implicated. To acquire this knowledge and to apply it in each particular case, we all know is as important as it is difficult. We can put out a spark but to quench the flames is the difficulty. To ascertain first that an organ is diseased and then how much it is diseased, and then the nature of the disease, are the points to which we should ever direct our most constant and anxious attention.

Pneumonia or inflammation of the lungs is one of the most common and fatal complications of typhoid fever, and what is remarkable it is commonly in the latent form. You may have extensive disease or inflammation of the lungs without the slightest cough, pain or difficulty of breathing, so that by the symptoms or rational signs, no one would ever suspect its existence, and it can only be detected by auscultation and percussion, the principles of which science, though difficult of acquisition, and application, are as fixed and as certain as the principle

of mathematics. By this science and this alone, we may detect the pneumonia and its extent.

Why can we not relieve pneumonia complicated with typhoid fever as well as pneumonia, when it occurs as a distinct disease.

In pneumonia the lungs are not only inflamed, but saturated or flooded, as it were, with blood, so that they cease to perform but very imperfectly their functions. Now just as the miller, when his wheel is flooded, and thus unable to perform its duties but imperfectly, hoists his waste gate and lets off the superabundance of water, so we with our lancet open a waste gate and let off the superabundance of blood, and soon our machine begins to work smoothly and regularly. But we do not open the waste gate in the pneumonia of typhoid fever, because the already enfeebled system would be prostrated, if not sink under it. We cannot give tartar emetic in pneumonia of typhoid fever, because the irritation of the bowels, already great, would be still more increased. We have seen that mercury so far as its constitutional effects are concerned, is not applicable, and yet we do have to use it to break up these local inflammations. Whilst it does good to the local disease, it does greater mischief often to the general disease, and should be used very cautiously.

Not unfrequently when there is delirium, mistakes are made in supposing inflammation of the brain to exist when very often persons in this condition may be entirely relieved by a large dose of opium. Giving the patient a good night's rest, every night if possible, is of great importance.

Thus we see the importance of opium, but it has various other applications, such as checking diarrhœa, determining to the surface, &c. Opium in large doses is highly extolled by Graves and Stokes, where perforation of the intestines occurs, and whilst we may admit the principle of rest upon which it does good, there is but little hope of any patient ever recovering where this unfortunate accident occurs. We ought to explain to the friends the possibility of this perforation, and inflammation of peritoneum coming on suddenly and unaccountably, and it is in this way we are so often painfully disappointed.

Some writers and practitioners extol, almost exclusively, the virtues of stimulants in the treatment of typhoid fever, and when properly and scientifically applied, they are a class of remedies doubtless of great value. Your patient has cold feet and hands, and the circulation is feeble, and you know that the blood has receded from the ex-

treme blood vessels to the internal organs. You give stimulants to rouse the energies of the heart, which is nature's forcing pump, and the blood is thrown back to the extreme parts of the system, and good is thus accomplished. But in pneumonia, the lungs, the reservoir of the system, are saturated and flooded with blood, and the blood vessels are all filled, and he who under these circumstances should stimulate the heart to greater efforts, would commit as great an error as the man who continues to increase the power of his engine for forcing water or steam into a reservoir already filled.

We think, however, that stimulants and tonics may be used judiciously at a much earlier period in the treatment of this disease, than is usually recommended. Remembering the constant tendency of the disease is to prostration, we should in every way possible endeavour to husband the resources of the system, and yet at the same time that we would avoid Scylla, we should be careful not to get upon Charybdis.

Diaphoretics and diuretics are not unfrequently indicated, and should be used according to circumstances. Hemorrhages and diarrhœas are very common and fatal complications of this disease, and he who is most prompt and energetic in meeting these and other indications as they arise, upon general principles, will be most successful in warding them off.

As we do not profess to perform miracles, candour and honesty compel us to acknowledge that there are complicated cases of typhoid fever which are beyond the reach of our art, and he who professes to cure all cases either deceives himself or, what is worse, intends to deceive the public. But shall we abandon our patient to his melancholy fate because we cannot promise a certain cure? Will the lawyer forsake his client because he fears he cannot afford him a remedy? Will the pilot commit his ship to the raging sea because he cannot quell the storm?

When we contemplate the triumphs of our science, as seen in the discovery of vaccination by the immortal Jenner, and in later times of chloroform, the great exterminator of pain; when we remember that many diseases, once the opprobrium of our art, are now easily managed; when we consider that our science is now pursued, with a zeal and ardour unparalleled, by a host of briliant intellects, and that the cry for reform and a more elevated standard of medical education is everywhere heard, may we not confidently hope to gain many a triumph

over disease in all of its countless forms, and let us strive so that our noble profession may, at last, receive the just award of that enlightened public sentiment which always, sooner or later,

> "Enshrines the virtuous in the light of day,
> And damns the vicious brood to darkness and decay."

ART. II.—*On the Use of Diluents in Certain Forms of Neuralgia.* By J. F. PEEBLES, M. D., Petersburg, Va.

The particular form of neuralgia, to which reference is made in the ensuing remarks, is that which is now believed to arise from a vitiated state of the blood, the pain being, as Romberg has happily expressed it, "the prayer of the nerve for healthy blood."

It is now, it is believed, admitted that from two distinct sources the circulating current may become contaminated in such a way as to create local or general hyperæsthesia of the nervous apparatus—the one external, the other internal.

In the former there is an entrance of noxious agents from without, typified by lead poisoning and miasmatic impregnation; in the latter there is either simply retention in the blood of matter due to the metamorphosis of tissue, which should be excreted through the kidneys or other channels, or, as in anæmia, there is a relative disproportion in the normal constituents of that fluid. Admitting the origin of neuralgic pains from this source—irritating matter in the general circulation, impinging upon the nerve tissue—it is not necessary to go into the discussion here of the exact agent or agents which give it this property. Such an enquiry, however interesting, even if it would lead to results entirely satisfactory, (which in the present state of the science is rather problematical, at least, by the methods of investigation within the reach of the general practitioner,) is not essential to the understanding or the application of the treatment which we propose, because it is equally well adapted to the symptom, let it arise from any form of blood poisoning.

The principle of this consists in a direct modification of the blood, by which its irritating properties are in a measure removed, through

the agency of diluents rapidly introduced into the system during the paroxysm.

In this simple way, I have succeeded in speedily allaying attacks of neuralgia, which have obstinately resisted other modes of treatment.

For the successful application of this plan, in practice, it is obvious that the great point consists in the selection of cases appropriate for it. Some test is wanting to enable the practitioner to indicate its employment. Curiously enough, it is believed that a careful observation of nature, in this form of disease, will point this out with considerable certainty. In another place* I have alluded to the fact that women suffering from hysterical neuralgia, (which clearly belongs to the form of disease under consideration), exhibit habitually remarkable exemption from thirst. Such women partake of very little fluid drink; beyond their morning and evening meals, when coffee or tea are drunk, I have had many to assure me that they consumed no other drink from day to day for weeks together. Such an entire absence of thirst is unnatural, and must be an attribute of the disease under which they are labouring. Taking this view of it, it becomes interesting to examine their condition with reference to the point; for although imbibing so little, it is well known that nervous women habitually discharge great quantities of water, in the form of urine.

In such cases the skin will be found harsh and dry, whilst the mucous membranes will almost always exhibit more than a normal degree of moisture; even in those rare cases where the latter are drier than natural, there will be found the same complete absence of thirst.

In this respect I have almost invariably found all women alike, who suffer from that form of hyperæsthesia of the nervous system, denominated irritable uterus by Dr. Gooch, and which since his time has received so many different names.

But this state of things is not confined to women. Since my attention has been directed to this remarkable connection between absence of thirst, and the form of neuralgia under consideration, I have often observed it in the opposite sex, where it presents itself under pretty nearly similar circumstances. Men apparently healthy in their appearance, are often found subject to violent and frequently repeated attacks, chiefly of frontal neuralgia. These attacks are associated with gastric and renal disorder, and general nervous derangement, indicated by coldness of the hands and feet. In a large majority of these cases, it will

* Vol. I, p. 257.

be found on enquiry, that these men consume less water habitually than is the ordinary standard in healthy individuals. Such attacks, although not fraught with great danger to life, it need not be said to the experienced are not easily cut short, and that the prevention of their frequent repetition is often difficult, even after a tedious course of treatment. Now it is just in such cases as these, that we would direct the attention of the practitioner to the use of copious diluents in their treatment. By rapidly diluting the blood, through these simple agents, I have frequently seen a paroxysm suddenly relieved.

Not only during the attack is this treatment effectual, but during the interval it becomes a most valuable auxiliary to a course of treatment intended to prevent their repetition. By instructing the patient to observe a rule to supply the system regularly with aqueous drinks, the change in the diathesis which is absolutely necessary to effect a permanent cure of the disease, I am satisfied, can be much more rapidly effected.

From the foregoing hasty sketch, the reader will readily perceive the class of cases to which this treatment is meant to be limited, as well as the supposed mode of its action, to induce the result. The practice which is recommended during the paroxysm, consists in the administration of copious draughts of barley, or toast water, or thin gruel, and in cases where these cannot be taken in sufficient quantities by the stomach, I have substituted plain water. There is, it is believed, but little difference with regard to temperature, although it may be mentioned that we have known copious draughts of warm water taken to induce vomiting, under the impression that gastric disorder created the difficulty, to relieve a paroxysm almost magically, without inducing that result. It is the quantity of fluid which is required, and when free draughts are borne well, it obviously implies that degree of rapid absorption into the blood vessels, necessary to its efficacy.

As it regards the quality of the diluent which may be adapted to the different conditions of individuals suffering from these attacks, it is probable that much choice might be exercised, although in the present state of the enquiry, the principles which should govern their selection cannot be stated. Indeed the whole subject, the writer is well aware, is presented in a crude form, but it may be allowable for him to state, that the conviction of the great practical value of this treatment, which experience has established in his mind, alone has emboldened him to bring it forward at this time.

ART. III.—*Bridle and Permanent Stricture Successfully Treated.* By R. H. BAYLOR, M. D., Amelia County, Virginia.

On 20th of last June, I was requested to visit a negro man, the property of Mr. ——. I was informed by the master, before seeing the patient, that he had contracted gonorrhœa some two years since, and and his opinion was, that the negro man had, at that time, gleet.

I found the patient labouring under the following symptoms: itching in the urethra, after passing water; redness of the meatus urinarious; ardor urinæ during micturition, which calls were very frequent; the stream of urine much smaller than usual, and sometimes forked or twisted; upon squeezing the glands, a small quantity of whitish mucopurulent matter exuded. There was pain in the lumbar portion of his back; general health very delicate and pulse quick and irregular. All that could be gathered from the patient, was that he had what he called the "running reins" for ten or fifteen months. From the symptoms and history of the case, my mind was made up to treat the disease as chronic gonorrhœa; having no suitable medicines with me, I requested the patient to visit my house on the following day.

The next day, I thought my diagnosis might be incorrect, or there might be stricture with gonorrhœa, as some of the symptoms clearly indicated; I at once determined to introduce a silver catheter into the bladder. No. 8 catheter was first employed, but, with most careful manipulation, I could not pass it farther than an inch from the meatus. No. 6 was then tried which I likewise failed in introducing. No 4 was with difficulty passed through the first stricture. Gliding on some inch and a half, it came in contact with membranous bands stretched across the urethra, and I could distinctly feel them give way as the instrument passed on. It then came in contact with another stricture, situated in the natural bend of the penis; without much difficulty it glided through the second one and entered the bladder. Several days after, some four or five of these membranous bands passed from the urethra, measuring half inch to an inch in length.

The introduction of the catheter was continued steadily for 3 months, at the end of which time No. 10 catheter could be readily passed. In the treatment of strictures, I invariably use the extract of belladonna as an auxiliary. The catheter is first dipped in warm water, and the extract used as you would oil. The course of the urethra also is well

rubbed with the extract of belladonna applied externally. My experience goes to show where the extract is employed in the treatment, the stricture will yield more readily to the catheter. But this is no new practice. This negro was very much emaciated and growing weaker every day. Nearly every thing taken as food, would disagree with the stomach; his liver torpid, with constipation of the bowels, and suffered excessively from cephalalgia; ordered the following powder at bed time: ℞. *Hydr. chlor. mit, gr. x; Pulv. Rhei, grs. xij.* This was followed the next morning by a mild cathartic. After the prescription had the desired effect, he took a tablespoonful of the following tonic mixture three times a day an hour before meals. ℞. *Decoct. Cinchon., f ℥vi; Tinct. Cinchon. Comp., f ℥ij; Quinia. Sulph., grs. xvj; Acid. Sulph. Dilut., f ℥j.* This prescription has proved very successful in my hands in debilitated cases of long standing; and in the commencement of fevers of a typhoid character. The patient's general health improved very rapidly under this treatment.

About four months after the first introduction of the catheter, I endeavoured to pass No. 11 in the bladder; the instrument met with no difficulty until it reached the membranous portion of the urethra; the resistance there was so great that the instrument was withdrawn. I hoped that the obstruction was nothing more than a spasmodic contraction of the muscles of the urethra, as no new symptoms had presented themselves. When the catheter was taken away, matter mixed with blood followed the instrument. I concluded that an abscess had formed in the membranous portion of the urethra, and the force employed to overcome the obstacle, which the catheter met with, no doubt caused the walls of the abscess to give away. Excessive irritation, and some pain followed, and I ordered the following injection: ℞. *Acid tannic, ℈ij; Morph. acetat., grs. x; Aqua rosa, ℥viij.*—To be used three or four times during the day. After the use of that injection for several days, all irritation disappeared. No. 12 catheter can now, without any difficulty, pass through the urethra into the bladder. He has no discharge from the urethra now, and he says, "I am as well as I have ever been."

In presenting this case to the readers of your Journal, I claim nothing new in the diagnosis or treatment of this disease, but to show how liable young practitioners are to form incorrect opinions in coming to too hasty conclusions with regard to diseases of the genital organs. The symptoms and history of this case would have justified any practitioner

in concluding that he had chronic gonorrhœa to deal with, without making an examination with that unerring instrument, the catheter.

ART. IV.—*A Letter from a Country Correspondent.*

MY DEAR SIR :—In the January number of your Journal, you call upon the profession to send you facts, and let alone the discussion, if they please. I applaud the suggestion, and by way of facilitating the matter, I send you a specimen page of my "Tabulation of Facts;" with the request that you will inspect it, and, if you think it may be useful, either in its present or in a modified form, reconstruct and publish the 'scheme,' either as a suggestion of your own, or if you prefer, as that of an anonymous correspondent. Even if without as much merit and promise of usefulness as I attach to it, somebody else may work out a plan that will be available.

It professes, you observe, to be a physician's 'diary,' in which charges and 'notes at the bedside,' are to be written at once. They may be all, literally, written at the bedside, or under the roof of the patient. A country physician, for whose use particularly, this is designed, ought, in my opinion, punctually to record his charge before he leaves his patient's roof, for fear of interruption at night, (the usual time of "charging up" the day's work) and consequent delay and error amidst a multitude of names and services. Much more ought he, (or a city physician either, I presume) to record at the earliest moment, all that he wishes to remember and subsequently to record, about each case :—it were worse than traditional, the story of a protracted disease, reaching thro' weeks, months, and may be years, recalled after that lapse of time, from even the most retentive memory. So that, nobody it is to be hoped, will undertake to give us facts which he cannot also assure us were written down at least daily, as they were observed. And if they were to be written thus daily, I can think of no more labour saving design than something like that submitted.

The formula is framed upon the ordinary rules which guide a doctor's enquiries, embracing under the same head some things which may reasonably be associated, and which must be omitted perhaps, if they are not put in there. For example, 'pulse' and 'respiration' may be

FERENCE.

Day of M Name, Age, Sex	Name of Disease.	TREATMENT.
February 15th,		
Miss L., æt. 15, 3 days sick—ch	Pneumonia low. lobe R. L.	8 cups R. side, 16oz. bl'd, calom. Dov. P. aa grs iij. every 4 h'rs,—poultice aft. cups, tart. emet. wat.
February 16th,		
Miss L. Visit Charged $5.	Pneumonia interm't Fever.	Bled 15oz. Quinine, 15grs. one dose,—blister.
February 17th,		
Miss L. Visit Charged $5.	Interm't fever. Checked.	Blister poulticed,—Gum water,—Quinine, 12grs.
Col. R.—Jim, æt 31 days sick—ch	Perf. Intest. and Peritonitis.	Hot foment. and blist. to pub.—Camph. and Laud. aa. 1 dr'm every 2 hours. Died in 10 hours.

The abo we will call *Dr. Method*. When we state, that for eighteen year stowed on him. His letter of explanation, which accompanies t acts," that we cannot refrain from giving it to our readers in full nserted as explanatory of the idea proposed.—Ed.

associated, requiring only figures or initials of 'qualities,' to express what we usually desire to remember about those functions. 'Bowels,' will be a head requiring more space than any other, perhaps, except 'lungs' and 'heart,' as it may have to embrace 'number of operations,' 'nature of operations' and 'sensations' attending them. Thus, if I wished to record 'tympanitis, pain, diarrhœa, absence of bile,' the entry would be under head 'bowels' (I prefer this to the more generic 'abdomen'). "Tymp: pa: diar: no bil."—to which entry two lines, horizontal, might be appropriated. A sett of symbols, (to be best devised by each one for himself, yet readily suggested by the editor of the plan), may extend the record, if necessary.

'Genito urinary' will embrace 'kidneys,' 'ureters,' 'bladder,' 'prostate gland,' &c., 'testicles,' 'uterus,' &c. Sometimes a note will require to be made in terms of a deranged function, or a healthy function, as the case may be, ex. gr. 'labour;' sometimes it may be briefest to do it in terms of the structural lesion, as 'chancre,' 'stricture,' 'orchitis,' &c. &c. This applies to all the heads.

I have revolved the question how far it is expedient to assign names to the groups of phehomena, and have supposed that it might be proper to do so from the first, if a name could be given, but with the special observance that we shall have the benefit of errors of prophecy in any reports made public. The plan would be calculated more to awaken the profession to the folly of hastily naming, and treating the name of diseases, than for any other purpose. If the record is purely for private use, the lesson will be none the less instructive to all candid men. I say we ought to have the benefit of all the mistakes, for the plain reason that we shall know the road better, the more we learn its diverging ways, and sources of peril of every kind.

There is no doubt that we may profitably, from the first observation, give a name, hypothetical if we please, with the qualifications supposed. But, especially, that we shall, with decided propriety, give the name if it admit of one, when the case terminates; so that, if we wish to see how many cases of syphilis, dysmenorrhœa, typhoid or remittent fever, intermittent fever, &c. we have treated in a month, year, or five years, we have only to run over the column of 'name,' in our diary and count.

If a scheme were ever published for general sale, it ought to be with a distinct announcement in the preface, in conspicuous character, that, to change a record for publication, after it has been made deliberately,

and according to then present impressions, shall be esteemed in every conscience, a grand violation of faith and honour.

I know not that it is a necessary fault of the science and practice of medicine, but it has always seemed to me that there was less reliableness in the statements of medical men, respecting what they have seen, than is either commendable or useful. There is a singular tendency to make something marvellous out of what, if rightly observed, would have proved to be a very common affair. Then there is an instinctive shrinking from stating afterwards precisely what was thought and done at a previous time, if some inconsistency or mistake is to be disclosed. Indeed the mind is obliged, after a series of observation, to have an impression which shall be the aggregate or general result of all, and thus averages, will be struck, leaving out the successive points, which are exactly the things I want recorded, for accurate, honest deductions. I wish to have the very best correctives possible, of vanity, self-love and fear of blame. Do I judge the profession too hardly?

I have elongated this letter already beyond any expectation, for I began on half a sheet. Yet you will pardon me if I add a few more last words.

It is not supposed that those cases only are, according to this design, to be recorded, which open with grave symptoms. On the contrary, it is particularly desired that all, no matter how trivial at first, shall be noted precisely in the respects to which the doctor directs his interrogatories. For we all know how many insignificant inceptions issue in serious maladies, perhaps in death. And often, the physician is desirous to recall, after months or years of slowly progressing disease, the first approaches or the subsequent advances, but is utterly unable; or, if he attempts it, finds inconsistencies and doubts meeting him at every turn:—has forgotten dates, remembers others badly; has forgotten the remedies, names or doses, or even the classes; forgotten the symptoms and signs, or confounds those of this case with what he has found in others, and hundreds of such fallacies. But, suppose he has, with a most reasonable degree of industry, and an exceedingly easy quantum of method, made these simple, daily records, and put them away in his pigeon hole, his drawer, or some other convenient depository, he knows all about it with a certainty and precision which would not fail to be exceedingly satisfactory.

Again, it is not supposed that, in reporting to a Journal, each day's record shall be always literally copied; any abstract or condensations

may be made which the judgment and the conscience (for I insist that conscience ought to preside over every report which medical men make public), of the contributor approve.

But the great ends which I would fain hope may be in part achieved by this scheme are, the introduction of more careful enquiry, as with view to immediate (and immutable?) record; the more elaborate consideration of facts and consulting of authorities prior to expanding the daily minutes into an entire history of such cases as seem to merit this dignity. For I omitted to say that we should desire to work up the minutes of some observations into detailed histories, while others would be left in the minute form—and all this, without any reference whatever to publication.

Lastly, the daily reference, so that, when we shall have not seen a patient for two, or three, or more days, we may learn from our memorandum the exact condition in which we believed that we left him, at a certain hour on a given day, with the chief remedies prescribed.

I have been keeping memoranda of this sort, with some fidelity, for 12 or 16 years,—indeed it is just 18 years,—and I am persuaded that I have made more out of one case thus than I should out of ten in the ordinary mode of observing and trusting to memory.

I have thus given you, very hastily, my ideas on this subject, which may go for what they are worth, and as to the method proposed, I hope that either you or any of your readers will not hesitate to modify it in any way which will add to its efficacy. All I desire—and that I do heartily desire—is to see something done to make medical men observe truly, interpret truly and report truly, or approximate thereto.

If I hear a doctor say, as I have heard, that he never has lost, in a long experience, a single case of pneumonia, nor typhoid fever, &c., I anxiously desire the facts, if he can report truly, upon which the statement is founded. And when I hear another say, that in a practice of 20 years he had performed embryotomy 15 times, while I, and three or four other physicians in the same vicinity, in an average practice each of 20 or 25 years, have, altogether, never had occasion to cut more than 5 children, I am exceedingly curious here again, to learn the facts and grounds upon which the thing has been done.

LECTURES.

I. *Lectures on Fever.* By WILLIAM STOKES, M. D., Regius Professor in the University of Dublin.

LECTURE XI.

In speaking of the affections of the mucous membranes in fever, we said nothing with respect to lesions of the larynx or trachea as a result of the essential disease. Taken as a localised disease, I would say that this lesion is not very commonly met with; and we may safely hold, that it is by no means so frequent in the petechial fever of these countries as it appears to be in the so-called typhoid fevers of the Continent. This is the condition to which Rokitansky has given the name of the laryngo-typhus, by which he means a secondary lesion of the mucous membrane of the larynx and trachea, analogous to that of the bronchial membrane. It is, then, a secondary affection of the fever developed in the windpipe, and either confined to that part, or, at all events, predominating in it. I think it highly probable, that, in most cases of this disease, there is more or less of an associated affection of the bronchial membrane. But, so far as the fever of this country is concerned, the converse of the proposition does not hold good; for we constantly see the most profound bronchial affection without tracheal or laryngeal symptoms. We have met a few cases which would answer to the description of Rokitansky's laryngo-typhus. A more proper name for this disease would clearly be, a typhus affection of the larynx. In those cases which we have seen, the symptoms were, loss of voice, or a certain degree of hoarseness; the cough very rarely, indeed, had the laryngeal character, and I do not remember any instance of stridor in connexion with the other laryngeal symptoms. In some cases, the weakness or hoarseness of voice continued for a considerable time, and did not disappear until convalescence was far advanced. I have often thought, that, in these cases, the lesion of voice was to be attributed more to the weakness or paralysis of the laryngeal muscles than to any form of irritation or inflammation of the mucous surface. For, although we cannot bring any observations from dissection to throw light on this point, we may fairly believe that the laryngeal muscles are liable to be affected in typhus, just as the muscular fibres of the heart are found to be; and that the same process which causes a typhus deposit in the mucous surface may be repeated in the vocal muscles; and that a certain time must elapse before these organs recover their healthy condition. They may also be weakened quite in-

dependently of any structural change, just as we see to occur in the heart; for in this latter organ there are doubtless two forms of debility in connexion with typhus fever,—in the one we have weakness with distinct softening of structure; in the other, a debility which appears to be purely nervous. This leads me further to draw your attention to the probable existence of similar conditions in the circular, and perhaps, also, in the longitudinal fibres of the bronchial tubes in the secondary disease of typhus. I have little doubt that such a condition exists in many instances, and that a weakness, with or without softening of these structures, becomes an important element in the bronchial disease of fever. If, as some modern authorities have lately urged, these circular fibres are really the expectorating muscles, we can readily see how any weakness or paralysis affecting them would greatly increase the danger of a patient in fever, already suffering under copious secretion into the bronchial tubes. We can further understand, not only how this condition would superinduce what is termed effusion into the chest in fever, but also why it is that in the treatment of the bronchial disease of typhus there is such danger from the employment of the antiphlogistic method, andon the other hand, such admirable results from the bold use of tonics and stimulants. I have before drawn your attention to the fact, that in many of our most remarkable examples of typhous softening of the heart, there was a great amount of the secondary bronchial disease; and in such cases you will constantly see the associated diseases of the heart and lung, progressing or retrograding simultaneously, the treatment adapted to the one being also adapted to the other. In the heart, so far as we know, we have only to deal with the affection of the muscular structure; in the lung we have at least two different forms of anatomical structure affected, the muscular and mucous tissues. But the existence of the essential typhous state so far assimilates them that the vital condition of both is depressed in a somewhat similar manner; and it happens, that whatever is tonic and stimulant to the one is equally so to the other, and that to support and augment the vital energy of both structures, is the only means by which we can add the assistance of art to the efforts of nature in throwing off the disease.

I am particularly anxious to direct your attention to the study of the effects of the typhous state upon the involuntary muscles generally considered; the subject has been by no means sufficiently examined; but I am satisfied, that even independent of all we know concerning pathology of the heart in typhus, there is still much important matter to be worked out with reference to other internal muscular structures. A very common symptom, as you all know, in typhus fever, is that of deafness. Now, although I cannot give you any anatomical observations upon this point, yet I think I am justified in suggesting to you, that this symptom may proceed from a condition which is one of the secondary affections of fever, and that it is either a simple alteration of the power of the auditory muscles, or that this lesion is combined with structural softening, or, again, that it is a combination of a muscular with a mucous disease, both under the influence of the typhous state.

Of one thing, at all events, we may be certain, that this symptom in typhus is not to be taken as a sign of inflammation either of the brain or its membrane, or of the ear itself. Like the other secondary affections of typhus, it supervenes in the course of the disease, spontaneously and silently. I have used this phrase before, and you understand what I mean by it. It usually comes in persons who have had no predominance of nervous symptoms, in patients in whom we have had no occasion to direct attention to the head; it is rarely, if ever, preceded by, or accompanied by pain in the ear; it almost always affects both ears, though, in some cases, one organ is more affected than the other; it subsides without treatment, and I do not remember a case in which otorrhœa occurred as a symptom of affection. You may meet cases of purulent discharges from the ears, especially in young persons of a strumous habit, who have been attacked with earache during their imperfect convalescence; but such cases have no relation to the true typhous deafness with which we are now occupied. As I said before, I have only clinical observation to bring to bear on this matter; we have no dissections to throw light upon it. One of the traditional prognostics in our fever hospitals is, that this deafness may be regarded as a favourable sign. However this may be, we have rarely, if ever, seen a case in which it occurred prove fatal. A French author has lately published a memoir on the subject of deafness in connexion with the fever of Paris, and he refers to the results of several dissections, to show that it is a symptom of internal otitis. We can only say, that, whatever may be the case in the typhoid fever of the Continent, such a view is quite inconsistent with our experience; and, even though we have no dissections to guide us, we may yet safely believe, that the deafness which occurs in the typhus of this country, is no proof of the existence of a local inflammation; and that in its rise, progress, and spontaneous subsidence, it is perfectly analogous to those varied affections which belong to the group of secondary effects of the one essential disease. We have, I repeat, only clinical observation to guide us here; but this is, in itself, a source of knowledge which cannot be too highly prized; one which, under favourable circumstances, gives us more trustworthy results than the most careful *post-mortem* examination. It is often more valuable to determine the state of the living organ, though we cannot see it, than to minutely scrutinize the dead parts. What would Medicine be, if its great principles, maxims, and rules were founded solely upon what we see in the dead body.

You must not suppose that I undervalue pathological anatomy; but let me warn you against the error of considering it as a guide in medicine superior to the study of the living man, or as I might say, the living disease. The study of vital conditions is often found to excel *post-mortem* investigations in the evolution of useful results; and there is no class of cases in which this superiority comes out more clearly than in the essential diseases, and especially fevers; no matter whether we seek for a theory of the disease, or for rules of treatment. If we could infer the symptoms of fever from dissection of the bodies of its victims; if we could say that in this case there must have been one

class of symptoms, and in another a different order and nature of symptoms; if we could, as it were, mentally re-construct the fever from its organic remains, then, indeed, what I have said would be an unsafe and hurtful doctrine. But it is not so; and the truth appears to be, whether we consider fever in its totality, or having reference to particular symptoms, that the worse fevers are those which produce the least organic change, and that when these changes are to be found, they are, as I have so often urged upon you, inconstant, unnecessary, and altogether incompetent to explain the nature or character of the disease.

Bear in mind, that medicine had attained a great value before pathological anatomy was cultivated. Its rise and progress were solely due to clinical observation; or, in other words, to the study of the vital conditions in disease, and the effects of remedies upon them. And admitting to the fullest extent the importance of the most minute study of the dead structures, especially when connected with the symptoms and history of disease, we must still, I believe, place pathological anatomy in the second rank, as a means of extending our Medical knowledge.

On the other hand, to hold that Pathological Anatomy has not advanced our knowledge of fever would be an error. If it has not told us what fever is, it has shown us what it is not; and this alone is a great boon. But it has done much more. It has taught us to know the singular though varying phenomena of the secondary diseases; it has shown them in their rise, progress, and spontaneous retrocession; it has taught us the re-action of new local organic disease upon them, and also their influence in modifying the laws of periodicity. It has not, however, enabled to us to say when we find an organ free from change—that it was not functionally affected during life; nor, again, that where we do find structural alteration—that the disease may not have been latent, that is, unattended by any special or distinctive symptoms.

But let us return to the pulmonary conditions in fever. I have spoken of the bronchial affections, and of the development of tubercle either in the course of a fever, or as succeeding to it in a short space of time. Now, I have a few more observations to make on this subject.

I shall not apologise to you for returning to the consideration of the pulmonary affections in typhus fever. The truth is, that this is a subject on which but little information is afforded by systematic works. We have examined the principal symptoms of the bronchial affections in typhus; and also the history of the tubercular deposits which appear as secondary phenomena of typhus fever.

I suggested to you, that tubercular matter might be considered as one of the secondary deposits of typhus; and that we are justified in believing that, under certain circumstances, there may, with the same original or essential disease, be a variety in the nature of its secondary deposits. You will remember, that we examined two cases of tubercle in connexion with typhus; in one, the deposit oc-

curred at the height of the fever, at the time when all its characteristic phenomena were best developed; in another, there was an interval of apyrexia between the subsidence of the typhus state and the appearance of the tubercular disease. Some might suppose, then, there was no connexion between the second set of symptoms and the first; but it is not more probable, or, at least, is it not possible that the interval of apyrexia was analogous to the intermissions of an ague, and that the deposits in the second attack were still the result of the original disease; or, again, that the first attack had, as it were, prepared the entire organism for the elaboration of another form of deposit. I have before alluded to the fact, that, in the epidemic in which these accidents were most frequently observed, there was a strong tendency to relapse. And, from all these circumstances, I conclude, that the tubercular disease, in the second attack, may still be considered as the result of the typhus poison.

There are other points which this study of the connexion between typhus fever and tubercle helps to illustrate. One of the most important is, that we are led to look at tuberculosis under the aspect of an acute disease. Our views of it are, therefore, enlarged; for, although what has been termed (though often improperly) acute phthisis has been described in books,—yet, in the minds of most men, the idea of chronicity is attached to tubercular disease. But we have seen, that a patient may die with typhus fever and its consequent tubercular deposit within fourteen days. And again,—we find, that in the case of the consequent tubercle, that is where the disease has exploded after an apyrexial period, the patient may die with tuberculisation of all his organs, and without suppuration of the tubercle; or he may actually have innumerable softened tubercles in the lung and die of the disease within a fortnight after the commencement of the new attack. Such a patient may be said to have died from acute tubercle; but the term acute phthisis is improper, for the symptoms of consumption are by no means necessarily present.

In speaking of the case in which we made the diagnosis of the formation of tubercular deposits during the course of a petechial fever, I believe that I forgot to mention one remarkable symptom, namely, the extraordinary sweating to which the patient was liable. He had several paroxysms of sweating in the course of each day, and to such an extent, that when we removed the bedclothes clouds of vapor rose from the surface.

It is important that you should not allow erroneous ideas as to the constant chronicity of these affections to take possession of your minds. Even cancer, in some of its forms, may be a singularly rapid disease. I have observed large cancerous tumours to form under the integuments within a very days before death. They were filled with the soft encephaloid matter. In this case, however, the patient had long laboured under a vast cancerous deposit within the chest. But I well remember another case which still better illustrates the occurrence of cancer as an acute disease. The patient was under the care of my friend the late Dr. Little, of Sligo. The case is an example of the

rapidity with which organs may become cancerous, such as few persons who have not studied Medicine at the bedside could have any idea of. It was that of a lad, aged about 18. He had long suffered from neglected ulcer of the leg. On admission into Hospital, he had a vast corroding ulceration, engaging the whole leg from the knee downwards; and so extensive had been the destructive process, and so greatly had the system been exhausted by the suppuration and irritation of the enormous ulcer, that it was determined to remove the limb. For a certain time everything went on well, the wound healed kindly, and the patient not only recovered his appearance, but actually became fat. He was soon to be dismissed from the Hospital, when he was attacked with pain of the right side, and symptoms of intense pulmonary irritation. The disease resisted all treatment, and he died within a fortnight from the period of the attack of the pain of the side.

On dissection the lungs were found almost completely filled with masses of the soft white cancer. These masses varied in size from that of a pea to that of a large walnut. I presented the parts to the Pathological Society. Now, all this singular formation, or at least a very large portion of it, must have occurred in the short time that elapsed between the invasion of the pain and his death; for no one could suppose that with such an amount of disease there could have been perfect freedom from cough or difficulty of breathing.

Before we leave this subject, let me present it to you in another point of view. In these cases we see tubercular disease occurring as a general affection, and not merely as a disease of the lung. In these instances the affection of the lung was simply the production in that organ of a pathological state which engaged other viscera often equally and simultaneously. Now, although we do not say there is no difference except as to rapidity and extent of deposit between these cases and those of ordinary phthisis, yet it is useful to bear them in mind in all our dealings with that fell disease. The progress of Medical opinion is every day tending to the doctrine, that to consider consumption, as the word is usually understood, as an original disease of the lungs, is an error. Why it is that in so many cases the deposit appears to be first formed in the lungs, we do not know; nor why an attack of pulmonary irritation appears so often to be its exciting cause. Perhaps, as in the long, silent periods of an intermittent fever, the disease, even though it be a pure neurosis, still exists, there may be conditions in which the system is ready for the production of organic disease for an indefinite time. This may be true, not only with respect to tubercular disease, but also in many other essential affections, including a variety of fevers. And this disposition, this silent state of the malady, may itself pass away, and none may ever know how near the individual was to the invasion of a dangerous or fatal disease. I do not allude to what is called the latent periods of fever, but to a condition in which the occurrence of a fever or other essential disease is a possible or even probable, but not a necessary consequence. Be this as it may, of one thing we may be sure, that the less we consider phthisis as a pure disease of the lung, the better we shall treat it, and

the less, day by day, will it be ranked among the opprobria of Medicine. If consumption be not, strictly speaking, a disease of the lung, but a morbid state affecting the whole economy, you can understand one cause at least, for the too frequent failures of the attempt to cure it. If the pulmonary lesion be but the second step in the morbid process, or if not only the lung, but other organs are engaged,—what are you to expect from adopting the absurd, and often cruel, treatment so commonly used in cases of the disease? The blisterings, the leechings, the setons, issues, and eruptions by tartar emetic ointment, which still disgrace the practice of Medicine, will be soon unknown among our more enlightened brethren. You cannot conceive the amount of suffering inflicted, and of positive mischief done, by the adoption of the doctrine that phthisis is to be treated as a localized, original, and irritative disease of the lung. Ask a practical Physician as to his experience of phthisis, and he will often tell you, that, among the few cases in which a recovery took place, there were certain instances in which the patients had, either from despair or some other cause, pursued a course very different from that which is so often advised. I have known myself several most remarkable instances in which a temporary, or even a permanent, cure had taken place, yet in which the patients had acted in every way contrary to rules. They had exposed themselves to all vicissitudes of weather; they had taken violent exercise, lived freely, and even drank hard. They recovered; and it is still a question whether this result was owing to the invigoration of the system by the return to their former habits, or the escape from the enervating effects of warm rooms, relaxing climates, cough mixtures, sedatives, and slop dict; to say nothing of the barbarous issue or seton.

You will, perhaps, say, that this is too long a digression; but, gentlemen, the study of fever furnishes many a text for useful instruction; and I believe that I am not misusing our time. Let me, before we conclude, give you an illustrative case. Some years ago I saw a gentleman, who came to town labouring under all the symptoms of well-marked phthisis. The disease had been of some months' standing, and the patient was a perfect picture of consumption. He had a rapid pulse, hectic sweating, purulent expectoration, and all the usual signs of tubercular deposit, and of a cavity under the right clavicle. I may also state, that the history of the disease was in accordance, in all particulars, with this opinion. I saw this patient in consultation with a gentleman of the highest station in the Profession, and we both agreed that there was nothing to be done. This opinion was communicated to the patient's friends and he was advised to return to the country. In about eighteen months afterwards a tall and healthy-looking man, weighing at least twelve stone, entered my study, with a very comical expression of countenance:— "You don't know me, Doctor," he said. I apologised, pleading an inaptitude that belongs to me for recollecting faces. "I am," he said, "the person whom you and Dr. —— sent home to die last year. I am quite well, and I thought I would come and show myself to you." I examined him

with great interest, and found every sign of disease had disappeared, except that there was a slight flattening under the clavicle. "Tell me," said I, "what you have been doing?" "Oh!" he replied, "I found out from the mistress what your opinion was, and I thought as I was to die I might as well enjoy myself while I lasted, and so I just went back to my old ways." "What was your system of living?" said I. "Nothing particular," he said, "I just took whatever was going." "Did you take wine?" "Not a drop," he replied; "but I had my glass of punch as usual." Did you ever take more than the one tumbler?" "Indeed, I often did." "How many? Three or four?" "Aye, and more than that,—I seldom went to bed under seven!" "What was your exercise?" "Shooting," he said, "every day that I could go out." "And what kind of shooting?" "Oh, I would not give you a farthing for any shooting but the one!" "What is that?" "Duck shooting." "But you must have often wetted your feet?" "I was not very particular about the *feet*," says he, "for I had to stand up to my hips in the Shannon for four and five hours of a winter's day, following the birds."

So, gentlemen, this patient spent his day standing in the river, and went to bed after drinking seven tumblers of punch every night; and if ever a man recovered from phthisis he had done so when I saw him on that occasion. Suppose, now, that he had been confined to an equable temperature, and a regulated diet, and had been treated in all respects *secundum artem*, what would have been the result? Any of you can answer the question. In point of fact, this very treatment had been adopted during the first three months of his illness, and his recovery may be fairly attributed not so much to the duck-shooting and whiskey-punch, but to the general tonic and undepressing treatment which he adopted for himself, and which his system so much required to enable him to throw off the disease.

Lecture XII.

I beg to draw your attention to-day to the case of the patient immediately behind the door in the Fever Ward. This man is in a condition to which it is not easy to give a name. It is plain that the man has some form of fever upon him; and he has at one time, as we have learned, been the subject of arthritic fever. At present, there is no evidence of inflammation of any of the joints; it was thought, when the patient was admitted, that there was a tendency to arthritis of one knee; but this has now gone back. The patient is a butcher, and his appearance is exactly similar to that which we so often see in men of his occupation,—a particular sallow hue, as if the blood was not in a healthy state. A great number of persons in this class of life are found to be liable to typhoid forms of disease. If they get pneumonia, the disease rapidly runs into a typhoid condition; if they get arthritis, it is very often of a typhoid character; and in some cases, it even goes beyond this, and we have that curious form of disease, in which, though

it at first appears to be arthritic, if you consider the local symptoms merely, and exclude the character of the fever, yet the swellings are found at first to be less in the cavities of the joints themselves than in their vicinities. We find a blush of redness above the knee, or below the knee, or at the side of the knee; and yet, when you come to look for inflammation of the joint, you cannot find it. After a time, this swelling of the surface is slightly increased, and soon it becomes evident that purulent matter has been formed, and the disease subsequently goes on multiplying itself in various parts of the body. It is a true pyogenic condition. Let me here refer you to a paper by the late Mr. M'Dowel, in the first series of the *Dublin Journal*, entitled, "Observations on Synovitis and Periostitis," in which you will find the best account that I know of the affection. As a general rule, the antiphlogistic treatment must be adopted with extreme caution in men of this class. There are two reasons for this caution. One is, that many of these persons are very intemperate, and use spirits and porter to a very great extent; but I believe this is not the principal reason. I think the principal reason is, that their systems are too highly animalized. They often live too much on animal food, eating meat for breakfast, dinner and supper, to the exclusion of vegetable food, so that they may be looked upon as in a state somewhat analogous to the scorbutic condition. At present, the patient whose case we are about to consider, has no very bad symptoms; but I thought it right to warn Mr. Fitzmaurice, in whose charge he is, to be on the alert, for these are very treacherous cases, and we do not know when unfavourable symptoms may show themselves. He has had one symptom which it is of importance to consider with respect to fever, and that is, epistaxis. This patient has had very copious bleeding from the nose.

Now, what may we suppose is the cause of epistaxis in this case? Gentlemen, it is extremely difficult to explain it; but as far as we know, it does not seem traceable to the causes which ordinarily induce this form of hæmorrhage. We do not find it attended with symptoms of active determination of blood to the head, with throbbing of the arteries, and the other symptoms of ordinary active epistaxis; it seems rather to be connected with a dissolved or impoverished, or in some way diseased state of the blood. When we compare typhus fever with that form which gets the name of typhoid fever, with respect to the frequency of this symptom, we find it is much more common in the latter than in the former disease; epistaxis is a common symptom in the non-maculated fevers, while it is rather, I would say, a rare symptom in the petechial typhus. You would not expect this from any *à priori* reasoning, but the fact is so; and there are other facts connected with these two forms of fever which appear to show, that in the typhoid fever there is some condition of the blood more analogous to what occurs in ordinary cases of anæmia, or in chlorosis, than in the true typhus fever. We shall see by-and-by, that with respect to the development of murmur of the heart, it is rare in the true typhus fever; while we have seen it over and over again in the typhoid, non-petechial, and the relapsing fevers. Other arguments might be brought

forward to prove this; but, when we speak of diseased states of the blood, we are speaking on very uncertain grounds. There are two facts, at all events, which are of importance—one, that in the true petechial typhus epistaxis is rare, while it is not uncommon in the other forms of febrile disease; the other, that cardiac murmur is rare in the true petechial typhus, and not uncommon in convalescence from the typhoid disease. If you take two reports on fever, one from a British Hospital —an Hospital in London, in Scotland, or one in Ireland,—take for example Dr. Cheyne's reports, or any of our extensive reports on fever, and compare it with a report on fever from a Parisian Hospital, and you will see how much more frequent epistaxis is in the Continental fever than in ours.

All of you that have been working so diligently in the fever wards must have observed, that since the session began, petechial fever, in its common acceptation, has been a very rare thing indeed with us; almost all our cases have been of a non-petechial character. This is a very interesting point, and the question for us to consider here is, whether this patient has the epidemic of the day, of which epistaxis is a not unusual symptom, or whether, in this case, the hæmorrhage may be traced to a morbid condition of the blood, such as occurs in purpura; or whether he has a pyogenic fever; and these are important considerations; or whether, again, he may not have them all mixed up together; and here, gentlemen, we perceive one of the greatest advantages of clinical study in the actual observation of disease at the bedside, as distinguished from the study of disease in books, viz: that in studying from books we are generally led to consider diseases in isolated forms, pictures of particular affections; but, in an hospital, we find, that in actual and especially in acute affections, isolation is the exception, and combination is the rule; and these combinations of diseases are infinite. This is the reason why a student of six months' or twelve months' standing, who has worked diligently in a clinical ward, is, I believe, in many instances, a better practitioner than the most learned man, who has drawn his knowledge exclusively from reading, however extensive. Do not suppose from this that I want to decry the study of medical works. Far from it; you must both read and observe; but it is in the clinical ward that you will learn what has not yet been taught, but which must be taught—which has not, at least, yet been taught properly in works of practical medicine; I mean the combinations and infinite complications of diseases, both local and general, and local with general.

I was observing just now, in the ward, in the case of the boy who had the pulmonary lesion, (I will not call it pneumonia of the lung,) with a low typhoid fever, (he is under the care of Mr. Daly,) how well this case illustrates the advantage of clinical study. If you take works upon disease of the heart, you find that it is assumed by almost every writer, that the first sound of the heart and the second sound of the heart are to be easily distinguished from each other. There are some persons who, if you were to say to them, in any given case, "I think that I have had considerable difficulty in saying which was the first and

which the second sound of the heart," would set you down as very deficient indeed, as one that had not been properly taught, and did not know his business. But the fact is, gentlemen, that there are many cases in which at first it is very difficult indeed to say which is the first and which the second sound of the heart. There are cases in which the most experienced man will require repeated observation before he can make up his mind on the point.

It has happened to me over and over again, that, after I thought I had made up my mind by examining at one part of the heart, when I changed the stethoscope an inch or two I was again thrown into doubt.

I mention this to show you how diffident we should be in our opinions upon these subjects, how slow we should be to condemn men because they do not come up to the mark laid down in books. The truth, in fact, is, that they go beyond it—that they are wiser than the authors of such books.

There are two cases in which it is often extremely difficult to say which is the first and which the second sound of the heart. One of these is, that triple combination which is so common, especially in private practice, where the patient has chronic bronchitis, a weak and irregular heart, and congestion and enlargement of the liver. This is a very common triple combination, if you speak merely of local diseases. But there is another element very commonly to be found in it, and that is, the gouty element; so that you may have a gouty man with chronic bronchitis, with a weak and irregular heart, and with an enlarged liver. In such a case it is sometimes extremely difficult to say which is the first and which the second sound of the heart. The two sounds are closely similar one to the other; and the action is so irregular, so uncertain, that you may be often for minutes together with the stethoscope carefully applied, and yet not be able to make up your mind. That is one case. Well, take another—such as that of the boy above stairs.

This boy presents some very curious phenomena; and he illustrates, again, difficulties which you would not anticipate, if you merely depended upon the text books for a diagnosis of disease of the heart. There are two difficulties here. It is difficult to say whether the murmur which he has belongs to the first or to the second. But there is a greater and a still more important difficulty in this case, viz: to determine whether this is an organic murmur or an anæmic murmur; and I am not ashamed to say that my own mind is not made up on the subject. In short, I could not take upon myself to say which it is. It would be very easy to adopt one theory or the other, and to argue in a very specious manner upon it; but I know thoroughly the difficulties of the subject; and I declare to you, that I think, at this moment, it would be hardly possible to say whether this boy has disease of the valves of his heart or not. There is one consideration connected with the case which is drawn, not from physical examination at all, but from the general history of the patient, and it is this, that, while organic

murmurs are rare—very rare in the form of disease which he has had —inorganic murmurs are comparatively common.

This is a very strong point. We are here under this difficulty, which you meet with every day in private practice,—that you are called on to give an opinion when the data that should guide you in that opinion are deficient. We want to know the previous history of this boy. If, instead of being in hospital, this boy were a patient in private practice, and had been under your care, and you had been the attendant on his family for years together, and were familiar with him, and intimate with the state of his heart, you would be able to say, first, if he ever had carditis; next, whether, before his late attack, he had murmur in his heart or not; but we know nothing of all this; and the only fact we have to go on is the observation of Mr. Daly, that, when the boy was first examined, this murmur was not there at all. I myself have no doubt as to the correctness of this observation of Mr. Daly; my own opinion is, that, whether the murmur be organic or inorganic, it has been developed since the patient came into the house. Can we distinguish by acoustic signs alone, gentlemen,—and this is a point which bears on the subject of fever in a most important manner, —the inorganic from the organic murmur? The answer to that question is, simply,—that, in the present state of our knowledge, there are many cases in which we cannot do so; that there is no special acoustic character by which you can distinguish one of these phenomena from the other. This looks like a depreciating statement, as far as diagnosis is concerned; but the cause of diagnosis would be much more injured by attributing to it powers which it does not possess, than by confessing its deficiencies. The diagnosis, in the case in question, is to be drawn from other circumstances,—generally speaking, from circumstances connected with the condition of the patient, the absence of the signs of inflammation, and a variety of other points which we will consider more in detail on another occasion.

To come to the murmur in fever, the observation has been made in a considerable number of cases, that valvular murmur, when the patient is made to sit up, does not disappear; but, we have found in this hospital that, in many cases in which a murmur was observed after fever, it was ascertained, that, when the patient was placed in an upright position, the abnormal sound disappeared, or, if it did not disappear altogether, it became greatly less intense; so that the disappearance of the murmur in the upright position is in favour of its inorganic nature, while its persistence or aggravation is in favour of its organic origin. So far so well. But, you will ask, is this rule absolute? That is a question which must be answered in the negative; for you will meet with cases of anæmic murmurs which are not influenced by position; and I believe there are, on the other hand, cases of organic murmurs which are influenced by position. There are, doubtless, some cases of organic murmurs in which, when the heart is made to act rapidly, the murmur either disappears, or becomes lost in the other cardiac sounds, so that you cannot distinguish it.

My own impression about the patient, whose case we are at present

studying, is that the murmur is inorganic. I trust it is; but I would not say so positively. I say this, because the character of the sound, although it is very aggravated,—although it approaches very closely indeed to the inorganic murmur,—is similar to a kind of murmur which I believe we, in this hospital, were the first to describe, that is, the true muscular murmur of the heart,—a sound produced simply by the contraction of the muscular fibres when they do not contract *per saltum*, when they contract vermicularly, as it were; it possesses more this character than the character of the true valvular murmur. There is another point connected with it which is of importance. If this murmur was valvular, it would imply a great deal of disease; a rough, rasping murmur in the situation of the aortic valve implies generally a great amount of disease, and commonly of chronic disease; and, under these circumstances, you may be prepared to expect that the patient will show other signs of disease of the heart. So that we here have a diagnosis drawn, as I often observed to you before, from that most important source, the want of accordance of the symptoms. There is here, supposing the case to be organic, a want of accordance of the symptoms; for we should expect, that with this great amount of valvular disease, there would be signs of dilatation of the left ventricle, that there would be signs of dilatation; symptoms which commonly attend upon this form of disease of the heart. And yet here is a most curious fact, that even when this boy had one of his lungs almost entirely obstructed,—a condition which often acts in developing latent disease of the heart,—even at that time the symptoms of heart suffering were not at all remarkable. So that there is here, to a great degree, this want of accordance in the symptoms; and this is against the opinion of the disease being organic, and in favour of the view that the murmur is of a functional nature. The great mistake, gentlemen, that was made,—I am happy to say that it is now going out very fast,—in connection with auscultation generally, was this, it was supposed that every disease had its special acoustic sign, and consequently the attention of students and physicians was directed to the study of those signs in a purely mechanical point of view,—merely to the observation of their acoustic characters.

There can be no doubt that it is of the greatest possible importance to study carefully everything connected with a diseased organ, both its physical and its vital phenomena; but what you have to learn specially is this, not so much how to detect the sign, or how to recognise it, as to know how to reason upon a particular sign when you have discovered it. It is here that the clinical student of long practice and experience has the greatest superiority over the mere reader. His mind is trained to reason upon the phenomena which he observes. Here we have a group of phenomena; and if we did not give ourselves the trouble of turning every possible point of the case over in our minds, we would come, I am sure, to a very imperfect and erroneous conclusion about it.

Bear this in mind always, that there is no pathognomic physical sign of any disease whatever. This cannot be too strongly stated and I believe that we might go further, and say, that there is no combination

of mere physical signs which, excluding the history and vital symptoms, can be justly considered to be pathognomic; at all events, if there be such a combination, it is one of extreme rarity indeed. We hear of certain murmurs being pathognomic signs of this and that disease of the heart,—of friction sounds being pathognomic of pleurisy—of crepitating râles being pathognomic of pneumonia—of amphoric sounds being pathognomic of effusion into the pleura. All this is wrong; it is based upon error; and you must expunge it altogether from your minds, if you wish to be accomplished physicians, investigators of truth, and faithful observers of disease as it is found at the bedside.

II. *Lecture on Clinical Teaching.* By WILLIAM FERGUSSON, F. R. S., Professor of Surgery in King's College, and Surgeon to King's College Hospital.

This being the first opportunity I have had, since the commencement of the present session, of addressing you in what some are pleased to call a clinical lecture, I think I cannot do better than explain to you the views I hold with regard to clinical teaching, and the method I am in the habit of following in offering that instruction. I am the more induced so to do, as considerable differences exist with regard to the system of clinical teaching. It is of frequent occurrence to find clinical instruction and clinical lectures used as synonymous terms, and a great deal of stress is put upon this style of teaching; but there is, in in reality, considerable difference between the two methods; and I have no hesitation in saying, that clinical lectures constitute only a small portion of clinical teaching. I say this, because I often observe clinical lectures are not of the style that answers to what I suppose to be meant by the expression of clinical teaching.

It not unfrequently occurs, that a clinical teacher selects a certain number of cases, and makes them the text of his lecture; but that is all, for the thread of his discourse runs mainly on the principles and practice of that disease, of which these selected instances are the type, and not on the cases themselves. Should these cases, however, vary in any special manner from each other, the student would derive much greater benefit by his teacher pointing out the main characteristics of that difference, discussing the correctness of his views, and stating the reasons which induced him to arrive at the definite opinion he may have offered, than if his remarks were of a more general character. In thus criticising his own dealings with his patients, I believe a more lasting impression would be made on the minds of his hearers.

In my system of clinical teaching, I am in the habit of selecting cases that I deem of special interest from those patients who are under my care in the surgical wards of the hospital, and likewise from among those persons who are sent to me by medical men in town and else-

where, for the sake of my opinion. I consider the study of these latter cases as highly instructive, as they are instances of disease which may be difficult of diagnosis, or at all events examples presenting some source of more than usual interest.

With regard to the mode of dealing with cases that are intended for special clinical instruction in the surgical wards, the remarks of the teacher should be made at the bedside, or in some part of the ward in which the patient is lying; but this is often very inconvenient, and circumstances may not always permit of lucid explanations being given on the spot. In many cases it is not desirable to offer any particular remarks or raise any discussion in the hearing of the patient; and, again, the ward is not quite the place for such remarks, as a kind of freemasonry often exists among the inmates, so that what is said at one end of the ward is subsequently retailed at the other. Considerable harm may be done in this way, especially in those cases in which it is highly necessary that the sufferer shoud be kept in ignorance of the real nature of his disorder, a true knowledge of which might exert such an influence upon him as to render his danger more imminent. I have said it is improper for the teacher to state too much in the hearing of his patients; indeed, he cannot be too particular on this point, for the slightest expression on the part of the surgeon is frequently construed into the most definite opinion. Even students who hear the opinion of their teacher expressed without any restriction should be careful not to carry such information to the wards, for in this way I have known the most serious consequences to ensue, the patients taking unnecessary alarm, suddenly leaving the hospital, and so preventing the surgeon and students from tracing to the last the details of cases which may be of great interest.

Many of these remarks are alike applicable to private as well as to public practice. In the former, particularly, the surgeon should be most careful not to say too much regarding his cases to those who are not in a position to demand such information.

If clinical remarks cannot always be made at the bedside of the patient or in his ward, it is necessary that some other place should be selected, and proper opportunities taken by the teacher to address his pupils. It is for this reason that you are frequently assembled in this theatre, which, in fact, may be considered as the bedside. The cases to which allusion is made, if not actually before you at the moment, should be fresh in your recollection.

This, then, is the method that I usually follow in my clinical teaching; and in order that you may derive as much information as possible, I strongly advise you to give as much of your attention as is compatible with your other duties, to the study of disease in the wards of the hospital. It will not suffice for you to content yourselves with hearing clinical instruction in the lecture-room, as that forms only a part, and I am not prepared to say the greater part, of your surgical studies. It is needful that you should see and accustom yourselves to the diagnosis of cases in the wards, catching the observations that your teacher may think necessary to make, and watch carefully the treat-

ment that is carried out for the cure or palliation of disease, before it be brought under your more critical and special notice in the lecture room. By attending to these points you will be better able to appreciate any observations that I may deem expedient to add to those I have already made. The patients who visit me at the hospital furnish subjects for an external clinique, and by watching my dealings with these cases, you may pick up a great deal of useful information. It is a common idea, that the surgical teacher imparts his knowledge solely by his tongue, and that all information must be conveyed by that organ to his pupils. Now, you must not suppose that you can obtain all necessary information by your ears; you must make good use of your eyes. For my own part I am not sure that I could not teach a deaf man surgery if he would only make good use of his eyesight.

While it is of advantage to glean as much information by your ears as possible, you must still remember that there are many points that can only be acquired by minutely watching the actions of the surgeon. I say this from the circumstance, that I do many things myself without making any special remark, and I would fain hope that you are capable of appreciating such without the necessity that I should make special reference to subjects of comparatively minor importance, which, if often repeated and insisted upon, would probably produce a bad effect, and prove tedious to those of you who must have become more or less familiar with them.

I have mentioned two sources from whence I select proper instances for clinical teaching. There is yet another. It is from those patients who come into this theatre for the purpose of undergoing an operation for the cure or alleviation of the diseases under which they may be labouring.

I will briefly explain to you my own impressions of the importance of witnessing a surgical operation in all its details.

No doubt, the principal utility of an operating theatre in a hospital which is attended by a numerous body of students, is, that they may have the advantage of seeing every operation of importance. Now, there are many surgeons, who, though they may tell their pupils the right use of such an arrangement, will in the performance of an operation, so conduct their movements as to prevent the assembly seeing each individual step. It is by no means an uncommon occurrence, to see the surgeon, attended by his assistants, completely surrounding the patient, and entirely precluding the main body of students from witnessing the operation. Now, this is not an exaggeration; I have seen it done many times. The older pupils among you must be conversant with my views upon the matter. Whatever I do in this theatre, my best endeavors are directed to the advantage of the unfortunate sufferer, but in so doing I never forget the duty I owe to you. I place myself and assistants in positions, perhaps not always the most convenient to ourselves, but which will not prevent you from obtaining the object for which you came.

As regards the performance of an operation, everything may seem to

go on smoothly, all the steps necessary to go through having been previously studied. The instruments are duly selected and arranged, and the assistants know their duty before hand. But sometimes a new feature is developed in the midst of an operation, unforeseen circumstances rendering it necessary that the projected plan should be altered, whereby another kind of manipulation and different instruments are required; and, should these not be at hand, delay is occasioned, perchance of detriment to the patient, and, at all events, of annoyance to the surgeon. To show you the importance of having all necessary instruments at hand, that any emergency may be promptly met, I will relate an instance that occurred to myself. I remember, many years ago, being about to perform the operation of lithotomy, when every staff I had with me proved too large to pass into the patient's urethra. I was consequently much to my annoyance, obliged to delay the operation till the arrival of a smaller instrument, which a kind friend, whose house was not far from the patient's residence, was not long in bringing. This was a lesson which has never been forgotten.

I have made these observations to-day, that those among you who are just commencing their studies at the Hospital should from the first be quite familiar with my method of clinical teaching. There are many little points to which I have alluded which may seem to give or to partake of a somewhat trivial nature, but which really I consider of the greatest importance.

CHRONICLE OF MEDICAL SCIENCE

PHYSIOLOGY AND PATHOLOGY.

1. *On the Presence or Absence of Blood in the Arteries after Death.* By F. W. Pavy, M. D.

Dr. Pavy has performed some experiments with the view of ascertaining whether the arteries were emptied after death by their own contractility. In one experiment, he had tied the carotid at its origin, and found it emptied soon after death. In another, he had tied the carotid first above, and then below, and, having placed it nearly horizontally, he made a puncture at the upper part, from which blood exuded, nearly emptying the vessel. These experiments he considered to strengthen the view that the contractility of the arteries was the cause of the emptiness of these vessels after death.

2. *Papillæ on the Schneiderian Membrane.* By ANDREW CLARK, M. D.

Dr. Andrew Clark exhibited some microscopical sections of the Schneiderian nervous membrane, demonstrating the presence of papillæ. The first approach to the discovery of these bodies was sometime ago made by Mr. Quekett, who, in injecting the mucous membrane of the nose of a fœtus, observed that some of the capillaries were looped. Mr. Bowman subsequently observed epithelial sheaths in the field of the microscope, but could not find the papillæ. Dr. Clark has subsequently ascertained the presence of papillæ, confined to the upper part of the septum narium, to which the ramifications of the olfactory nerve are distributed. They were mostly single, and the epithelium was imbricated, the points of the scales overlapping in a direction towards the apex. The question as to whether they were organs of special or of general sensation could not yet be determined.

3. *Causes of Coma and Insensibility.* By JOHN SNOW, M. D.

Dr. Snow is of opinion that coma and insensibility, however produced, are dependent on a partial interruption to the process of oxidation constantly going on in the brain and nervous system, and on which consciousness, volition, and sensation depend. Respiration, which is a process of oxidation, has a very close connection with sensibility and motion. In asphyxia, consciousness and motive power are lost, while the circulation continues; the person being placed, as regards respiration, in condition resembling that of the fœtus in utero. The symptoms of apoplexy may be connected either with extreme fulness or effusion, causing pressure, or with a bloodless state of the brain. In all these conditions, the circulation is impeded; and the process of oxidation, which can only take place through the blood, is diminished. In compression from effusion, the return of the functions of the brain is gradual; while in compression from fractured bone, the brain may resume its action as soon as the body pressing on it is removed; showing that irritation must have been going on, although the oxidating process was retarded by an insufficiency in the amount of blood supplied to the brain.

The coma and insensibility arising from narcotics also arise from a diminution of the oxidating process. The proofs that narcotics do limit the process, were:—1. The diminution in the amount of carbonic acid given off by the lungs; 2. The observation of Böcker, that the constituents of the urine are diminished in quantity under the influence of alcohol; 3. The reduction of the animal heat under the use of narcotics; 4. The less dark colour of the venous blood in patients under the influence of chloroform; 5. The power which chloroform and the greater number of narcotics possess of preventing putrefaction. The effects of cold in producing coma and insensibility are also referred by Dr. Snow to a diminution of the oxidating process. The local ac-

tion of narcotic substances was referred to, and was shown to be referable to the same cause.

The fact that patients are able to exist in a state of coma and insensibility, Dr. Snow explains by supposing, that different parts of the venous system have different degrees of affinity for oxygen. Sometimes, both in disease and during the exhalation of narcotic vapours, consciousness returns before sensibility; this probably arises from the fact, that the nerves remain under the influence of chloroform which has exuded into the extra-vascular liquor sanguinis, while the brain, being without lymph, sooner gets rid of the chloroform.

4. *Congenital Absence of the Pericardium.* By Dr. BRISTOW.

In a paper before the London Pathological Society, Dr. Bristow relates a case of congenital absence of the pericardium in a person who died with disease of the heart. The left pleura was contiguous with the pericardial sac, the heart lying in the cavity of the pleura and adhering to the lung at various points. A slight rudimentary pericardium was connected with the right pleura, and opened into the left pleura by a small orifice.

5. *Development of the Mammary Gland in the Male.* By Mr. TUFNELL.

At a meeting of the Dublin Obstetrical Society in January 1855, which we find reported in the Dublin Quarterly Journal for February, Mr. Tufnell read the particulars of an interesting case of "development of the mammary gland in the male," an affection of not very frequent occurrence, and which, as he had been able to obtain a cast for illustration, he thought might not prove uninteresting to the members of the society. Mr. Tufnell said:—"There are some peculiarities in the present instance which render it different from the majority of the cases heretofore recorded. The man from whose body I took the cast is a soldier of the 60th Rifles, an Irishman, and a labourer prior to enlistment. He is twenty-one years of age, fine, well-made, and muscular, 5 feet 11 inches high, and weighs 12 stone 7 lbs. His chest is broad, and well clothed with pectoral muscles, but has the unusual appearance of the left breast being developed in form and size equal to that of the female at puberty. The mamma is hemispherical, full, and smooth; when grasped in the hand it can be lifted off from the muscle beneath, and the contained gland then felt, a flattened, conglomerate body, consisting of several lobes, and as large as a small coffee-saucer. The nipple is prominent, standing out about three-eighths of an inch, and when taken up between the finger and thumb, and drawn forward, the lactiferous tubes can be distinctly felt passing from the gland to the nipple. The areola around is well marked, and of a pink colour, much brighter than that of the opposite side. In the cast the nipple does not appear nearly as prominent as it really is; for under the application of the cold plaster to the chest, in taking the mould, it

has shrunk and retracted. The opposite breast presents nothing abnormal.

The case before the society is one of genuine development of the mammary gland. It is no new growth or morbid production, such as characterize mammary tumours, no swelling or enlargement of the mamilla and its subjacent structures, but true development of the gland, precisely similar to the condition of the organ in its natural state in the female. Like it, too, it began to show itself at the approach of puberty, this man stating that it first attracted his attention when about twelve years of age.

The points in which this case differs from most others that have been described are, firstly, that it is limited to one side only, instead of both breasts being equally engaged; and secondly, in there being no deficiency or atrophy of the testicles or organs of generation. The penis of this man is, indeed, rather more than usually developed, and the testicles are of large size. The beard and moustache, too, are fully equal to those of men of his age and temperament.

Examination of this case tends to the consideration of the subject of lactation in the male. The fact of milk having been secreted by the male has been alluded to by Humboldt, Franklin, Dunglison, and Blumenbach; whilst Sir Astley Cooper, in his work on the Anatomy of the Breast, recites a case communicated to him by his nephew, Dr. Young, of a negro in Barbadoes having actually suckled a child. He was the grandfather of the infant, and his daughter having died soon after giving birth to a child, he took it, and nursed and suckled it himself.

I must say I had always been incredulous upon this point; but, since the inspection of the present case, and that detailed by Dr. Birkett, my mind is changed; and I do believe that it is possible for milk to have been secreted, under the powerful influence of strong mental emotion, such as that of this man's yearning after the offspring of his favourite child, provided the development of breast existed in his case, which we see in the one before us, and which was found in that recorded by Dr. Birkett. The case recorded by the latter is most satisfactory, because, in consequence of its coming under his observation in the dead subject, he was enabled to make a dissection of the parts. Both breasts were enlarged; and on careful examination each was found to be composed of a very large quantity of fibrous tissue, forming a stroma, and of the terminal vesicles of gland tissue, containing epithelial cells, all the essential elements of the gland."

6. *Single Kidney.* By M. Labe.

In the Comtes Rendus de la Societé de Biologie there is an instance of absence of the left kidney reported by M. Labe. There was no renal artery or vein on the left side, and there was no trace of the left ureter to be found. The right kidney was hypertrophied and in its normal position.

MEDICAL PATHOLOGY AND THERAPEUTICS.

1. *Lacto-Variolous Inoculation.*

A notion is prevalent in Europe, to a certain extent, that cases of small-pox in persons that have been vaccinated have become more common of late years. This is accounted for by supposing a degeneration in the vaccine virus. On the other hand, it is contended that such cases are not more frequent in reality, but are more noticed and commented. Several physicians of Lyons, convinced that vaccinia has lost its properties by successive transmissions, have made experiments to discover some other preventive of variola. They have endeavoured to obtain the good effects that experience assigns to variolous inoculation, while avoiding its dangers.

Starting from the dubious premise that vaccinia is the small-pox of cows, they have laid down the principle that it is more rational to have recourse to the disease as it affects the human race. The *Vaccine Committee* has paid much attention to these attempts to reestablish inoculation. M. Boucharcourt, surgeon to the Charity Hospital of that city, has encouraged them. A thesis by Dr. Bossu (*Thèses de Paris*, 1854) advocating this practice, is defended by an article in the *Gazette Hebdomadaire.*

In 1833, Brachet attempted to mitigate the effects of the virus of small-pox by mixing a drop of milk with each drop of virus. He obtained only a local eruption, and, being ignorant of similar experiments in England and Germany, he congratulated himself on his success.

The Lyons physicians still employ a mixture of small-pox virus and milk, selecting the latter as an animal substance that is readily absorbed. The operation is done as usual. The local and general symptoms are nearly similar to those of vaccinia. The pustules resemble those of vaccinia; they run their course in thirteen days. On the fifth or sixth day, a slight febrile movement comes on, and continues until the ninth day.

The results of the experiments are given in the *Archives Générales de Médecine* (April, 1854). They are as follows:—

1. In 18 of 21 cases, the lacto-variolous inoculation produced pustules only at the points at which virus was introduced. 2. The general phenomena were in no case sufficient to excite alarm. 3. The local phases of this inoculation are altogether similar to those of vaccinia. 4. The fluid of the pustules resulting from the primary inoculation is susceptible of being transmitted. 5. This fluid can be preserved for an indefinite period in glass tubes hermetically sealed. 6. It is probable that lacto-variolous inoculation will prove to be a protection against variola, since it renders the individual insusceptible of vaccinia. 7. The virus for inoculation should be borrowed from a child of good constitution with discrete small-pox. C. E.

2. *Cases of Epilepsy Successfully Treated with Strychnia.* By ELISHA HARRIS, M. D.

In the April number of the New York Medical Times, Dr. Harris reports six cases of epilepsy treated successfully with strychnia. Such success in the management of this intractable disease is certainly very rare, and calls for the special notice of the profession.

CASE I.—A girl aged 19, who had epileptic seizures occurring during menstruation, which function was normal, though occasionally the discharge was too profuse and long continued. The disease had existed for three years and had been treated in various ways, but without success.

Dr. Harris ordered exercise in the open air; a well directed hygienic remedy in this case, as the patient was a seamstress and of a strumous constitution; also the sponge bath, and nutritious diet. He also prescibed ℞. *Strychnia gr. j; Aquæ* ℥*jv; Acid Acet.* ℥*ss.* A teaspoonful to be taken after meals. The patient was considered cured after two months; but a slight seizure occurring, led to a repetition of the strychnia for one week. Five months have elapsed and there has been no return of the disease.

CASE II.—A girl aged 11, had epilepsy for three years, she was treated in the same way, with only one half the dose of strychnia, and was discharged cured in *five weeks.*

CASE III.—A sailor 48 years of age, with epilepsy of only two months standing, and in a general paralytic condition. Strychnia in doses of one twenty-fourth of a grain was administered for two months, and the epileptic seizures had disappeared for the past three months.

CASE IV.—Miss G., aged 28, with epilepsy of three years continuance, deficient menstrual function and nervous temperament; the attack occurring twice weekly. She was prescribed the following: ℞. *Tr. Nucis Vomicæ* ℥*ij; Mist. Ferri. Co.* ℥*iv.* A dessert spoonful after each meal. She is considered cured after three months treatment.

CASE V.—A servant girl 25 years old, with leucorrhœa and deficient catamenia, who had from three to five epileptic paroxysms daily. In three months under the use of strychnia combined with the iron tonics, she was apparently cured. An exposure to malaria during the summer, resulted in an attack of intermittent fever, and during the third paroxysm she suffered a severe epileptic convulsion. The two diseases ran on together until they were both checked after ten days, since which time she has not been heard of.

CASE VI.—A broker aged 39, a man of active mind and feeble physical organization, had been laboring under frequent headaches, which

had at last resulted in epileptic seizures. The use of strychnia in doses of $\frac{1}{40}$th of a grain frequently repeated, at once checked the paroxysms, and it is only now necessary to recur to that remedy on the return of the headache, to ensure an immediate relief.

The reader will at once notice that the short lapse of time since the discharge of these patients as cured, makes it very doubtful whether these flattering results are permanent. A person who is considered as well of epilepsy after *five weeks* of treatment, cannot be relied on with certainty to give testimony in favour of any method of cure. It is nevertheless true that the cases reported by Dr. Harris were manifestly greatly benefitted by the strychnia, and we think his paper has much of interest and value in it.

3. *Novel Application of Electro-Chemistry to Therapeutics.*

Chemistry is about to save from death, or a premature old age, those artizans whom the exercise of a cruel profession condemns to breathe metallic dust or vapours, who poison themselves daily for the sake of living, and acquire so many dreadful infirmities in the silvering of looking-glasses, the preparation of white lead, or working in the mines. Science comes to the help of the victims of industry or pleasure, and extracts from their bodies, atom by atom, the devastating metal that had fastened on their tissues, and weighed on the springs of life. These hopes are drawn from a memoir presented to the Academy of Sciences by M. Dumas, and the authors of which—MM. A. Poey, of the Havana, and Maurice Vergnès—will hold a distinguished rank among the benefactors of mankind, if experience confirms their assertions.

The invention consists in the application of electro-chemistry to the cure of the diseases we have mentioned; and surely, of all its marvellous uses, this would be the most admirable.

M. Poey takes an unfortunate patient, corroded by lead, mercury, gold, silver, or any other metal, and places him in a metallic bathing-tub, isolated from the ground. The man sits down, his legs horizontally stretched out on a wooden bench, isolated from the tub, which is filled with water up to his neck. The water is slightly acidulated, to increase its conductibility; and the acid varies according to the cases. Nitric or hydrochloric acid is used for the extraction of mercury, silver, or gold; sulphuric acid for that of lead. This done, the negative pole of a pile is brought into contact with the sides of the bathing-tub, and the positive pole placed in the hands of the patient.

The work of purification is now in full activity; the electrical current precipitates itself through the body of the sufferer, penetrates into the depth of his bones, pursues in all the tissues every particle of metal, seizes it, restores its primitive form, and, chasing it out of the organism, deposits it on the sides of the tub, where it becomes apparent to the naked eye.

In this great discovery, chance or accident has played a part. One of the inventors—M. Maurice Vergnès—occupied himself with galvanic gilding and silvering. His hands being in continual contact with

solutions of nitrate and cyanuret of gold and silver, got covered with ulcers in consequence of the introduction of metallic particles. One day he plunged the diseased organs into the electro-chemical bath, at the positive pole of the pile; and after a quarter of an hour, to the great surprise of the beholders, a small plate of metal brought into contact with the negative pole covered itself with a thin coating of gold and silver, extracted from the hands of the operator, whence the most powerful remedies had not been able to eliminate them. This discovery was made on the 16th of April, 1852.

The following experiment was made before the members of the Faculty of Medicine of the Havana.

A patient had undergone during a whole week an external mercurial treatment (frictions, with mercurial ointment). He had then taken several lukewarm baths, and it could not be supposed that any mercury still remained attached to the skin.

He was put into a water-bath mixed with muriatic acid. After having remained in it for five minutes, some of the water was taken out, and afterwards analysed by M. Baraccca, who found no traces of mercury in it.

The circuit was then closed; and, after the electric current had acted for about an hour, a new sample of the water was taken. Mixed with an alkaline sulphuret, the water became black; and a piece of copper having been dipped into it, gave sure signs of the existence of a small quantity of mercury. Thus the water of the bath now held mercury in solution.

During the experiment, a perfectly clean piece of copper had been placed at the negative pole. When it was taken out of the water, towards the end of the operation, its yellow-greenish colour not only testified an oxidation in which mercury had taken a part, but small white spots were scattered over the surface, one of which, of the size of a square line, was very brilliant, and of a mercurial whiteness. The plate having been heated underneath, the spot disappeared, and the orginal colour of the copper was restored, which proves that the spot was mercurial.—*La Presse.—Med. Times.*

4. *Treatment of Rheumatism in the London Hospitals.*

With certain modifications, according to peculiarity of case, the basis of the treatment of acute rheumatism now most generally pursued in the London Hospitals consists in the exhibition of the neutral salts. It is rare, indeed, to see a case treated into the prescriptions for which neither the acetate, tartrate, or nitrate of potash have entered. The congratulatory remarks which are frequently made at the bedside by physicians of long experience must be considered as strong evidence of the good effects of the improved practice. The disease no longer needs "the six weeks and patience" which it once required. Lemon juice still holds a high place in the esteem of some physicians, among whom we might mention Dr. Burrows, Dr. Risdon Bennett, and Dr. Rees;

while many others employ it as an adjuvant without relying on it alone. That in certain cases it exerts almost no appreciable influence, is generally admitted; while that in others it not unfrequently cures like a charm, is equally certain. What we desiderate is, an appreciation of the class of cases in which it, and in which other remedies, are severally most likely to be of use. Until that is more or less known, the only refuge is in complexity of prescription, an expedient always to be regarded with distrust, but not to be shrunk from when required by duty. An illustration of the occasional uselessness of lemon juice was afforded by a man under Dr. Babington's care, about a year ago, in Guy's Hospital. He was a man aged 47, and was admitted in the third week of an attack of acute rheumatism, for which he had kept his bed, and had consumed during the last four days no less than seven pints of lemon juice without the least relief. The juice had been obtained directly from the fruit, of which he had used eighteen large ones daily. Dr. Barlow, of Guy's Hospital, is accustomed to state to his clinique, that the most rapid recovery from acute rheumatism that he ever witnessed was under treatment by the acetate of potash. We may quote the following case as a fair example of the usual treatment pursued by that excellent practical physician, and also of its average results. The plan of treatment is, however, by no means peculiar to Dr. Barlow. H. T., a strong, robust man, aged 33, was admitted on the third day of his first attack of acute rheumatism. The disease was severe. Ordered to take a draught containing half a drachm of acetate of potash, ten grains of the nitrate of potash, and ten minims of the vinum opii, diluted with barley-water. For nine days he was kept on low diet, and on the tenth the improvement was so far advanced, that the decoction of bark was substituted for the barley-water in the prescription, and a better diet was allowed. On the fourteenth day he was convalescent, about the ward, and marked for discharge in a few days.

5. *The Indian Bael in Diarrhœa and Dysentery.*

Dr. Jeaffreson of St. Bartholomew's has been making some trials of the Indian bael, a new remedy lately introduced. The liquor baelæ is the expressed juice of the rind of a variety of pomegranate and it is extensively used by the native practitioners in India for the cure of diarrhœa and dysentery.

On the whole, the impression made on the minds of those who employed this remedial agent seems to be favourable, although the cases are few in which it was tried. In one case of chronic dysentery in which opium had failed of relief, the bael acted very effectively. The liquor baelæ is a brownish syrupy fluid, seeming to contain a proportion of tannin with much gum. Chemical analysis has failed yet to recognize in it any peculiar principle. It will require farther experiments to give this drug a permanent rank in the Pharmacopœia.—*Condensed from the Med. Times and Gazette.*

SURGICAL PATHOLOGY AND OPERATIONS.

1. *Penetrating Gun-shot Wound of the Heart.* By J. M. CARNOCHAN, M. D.

In the April number of the American Medical Monthly, we find a very interesting report of a case of gun-shot wound of the heart, where the patient lived *eleven* days after the receipt of the injury, during which time there were no symptoms of fatal mischief having been the result of the wound, and indeed the symptoms were such as to lead the attendants to anticipate a safe and rapid recovery.

The subject of this rare surgical phenomenon, was the celebrated Bill Poole, a noted pugilist of New York, who was shot down by a gang of ruffians during the month of February last, and whose death, with all the accompanying circumstances, has produced a great amount of excitement in the whole community. The important points in surgical pathology developed in his case, will extend this interest to the medical profession, and hence we are gratified to see the paper of his surgical attendant, Dr. Carnochan, who explains the condition of the parts, by means of a plate of Poole's heart.

Dr. Carnochan saw the patient two days after the affray. The wound which created the most alarm was situated upon the anterior wall of the thorax, about three quarters of an inch to the left of the mesial line, and a half inch below the line of the nipple. His assailant placed his pistol close to the chest and fired, the bullet passing slantingly from right to left. Poole almost immediately became senseless, cold, and apparently moribund, and remained thus for four hours. From this condition he rallied, and became so free from the usual symptoms of severe injury, that his medical attendant considered that the ball could not have penetrated the thorax.

An examination, two days after, found him with easy respiration, quiet pulse, 80 to the minute, and the surface of the body normal in temperature; the heart beating with healthy precision. His countenance was placid, and he was sitting up in bed conversing with his numerous visitors. He continued in this favourable condition for nine days, entirely disregarding the injunctions of his physician—that he should see no company, and remain perfectly quiet. On some days he would see and converse with more than a hundred persons.

On the ninth day after the accident, fever supervened, and the respiration became troubled. He still complained of no pain about the heart. These symptoms gradually grew worse, and the patient eventually sank on the eleventh day after the accident.

The autopsy, made seven hours after death, disclosed the following remarkable pathological condition.

The sternum being completely elevated, the pericardium was seen to

be much distended, and on its surface, in continuation with the external wound, was observed a rough spot, which proved to be an opening into the cavity of the pericardium, thinly closed by the exudation of plastic material.

The right and left cavities of the pleura were free from effusion, and the lung on each side was in a sound condition. The pericardium was found filled with serous fluid, tinged with blood, and was so distended that it encroached very much upon the lungs on both sides. Upon opening the sac of the pericardium, and removing the large quantity of serous fluid, the external surface of the heart and the serous lining of the pericardium were both found to be entirely covered with plastic exudation, presenting all over signs of high inflammatory action. A cursory examination of the heart in position did not disclose the presence of any foreign body. It was afterwards taken out, and upon a careful examination, a bullet one inch in circumference, was found enveloped in a delicate cyst, and embedded, to the depth of a quarter of an inch, in the muscular tissue of the septum, between the right and left ventricles, about midway between the apex of the heart and the base of the ventricles. Its locality was only indicated by the sense of touch, for as the wound had entirely cicatrized, there was no outward visible sign of its presence. Obviously, the cause of death was inflammation of the pericardium and heart and its results.

This case is one to be added to the few already on authentic record showing that penetrating wounds of the heart are not always immediately mortal.

It has, moreover, peculiar features which will render it remarkable in the annals of surgical pathology.

Several cases are mentioned in which patients have survived one or more days the effects of penetrating and non-penetrating wounds of the heart, inflicted by cutting instruments, and also of non-penetrating wounds inflicted by gun-shot.

But the peculiarity of this case is, that although the wound was a penetrating gun-shot wound, leaving the ball deeply buried in the tissue of the heart, the patient survived for a period of time so long as to encourage the hope of recovery.

This position of the ball discriminates the case from that mentioned by the French surgeon, Latour, where the ball had not penetrated deeply into the heart, but rested on its surface, partially encroaching upon the muscular wall of the heart and enfolded partly by the pericardium.

The autopsy of this case also revealed, that the wound was not only closed and cicatrized, but that a cyst was in process of formation around the ball.

By this case, also, it is established, that hæmorrhage is not necessarily a consequence of a gun-shot wound of the heart; for the serum found in the pericardium was merely tinged with blood, and there was no coagulum. The absence of hæmorrhage may be accounted for by the conical shape of the ball, and by its direction, two circumstances which favored its passage between the muscular fibres of the superficial

layer of the heart, without severing them, and caused it to rest slantingly behind the anterior coronary artery, without wounding it.

2. *Traumatic Tetanus. Chloroformisation. Cure.* By Dr. Th. De Dusche.

Jean W., aged 26, gardener, drove, while walking, a nail into the great toe of the left foot. This accident, which happened on the 17th of April, made him suffer much pain; but he was obliged to continue work, and was exposed, while heated, upon several occasions, to a cold wind.

April 20.—He felt, for the first time, difficulty in moving the jaw.

May 7.—He consulted the author, who directed the application of cupping-glasses along the back, ammoniacal frictions, and rest in bed. The patient, nevertheless, went to work for another day in the open air. The following day his general condition was worse. Besides the trismus, which was much more pronounced, he experienced stiffness in the sacral region, accompanied by severe pains; the face was red; the eyes injected; the pupils contracted; he was in pain and depressed.

Bleeding from the arm; a quarter of a grain of opium every hour.

May 6.—Tetanic spasms; opisthotonos.

Tobacco enemata; mercurial frictions; opium.

7th and 8th.—No change; obstinate constipation; the same convulsions. Calomel and acetate of morphia.

9th.—He was directed to inhale chloroform; all other treatment was suppressed. From the first inspiration the patient felt himself easier. The cramps ceased; the tetanic spasm diminished; and he fell asleep for half-an-hour. Upon awaking, he felt himself relieved, and the attacks recurred at longer intervals. The chloroform was continued, so as to produce a continued narcosis.

The same treatment was continued till May 20, that is to say, for twelve days, with gradually increased quantity of chloroform, until it amounted to thirteen ounces. The evacuations were regular; the mouth exhaled a mercurial fetor, although all mercurial remedies were arrested. A miliary eruption appeared on the neck, the chest, and belly. The symptoms returned with violence whenever the use of the chloroform was suspended.

21st.—The author discontinued the chloroform, and prescribed cold applications to the shaven head, and a quarter of a grain of acetate of morphia every two hours. The first dose was followed by sleep, and this recurred after each dose until the patient recovered.—*Gaz. Médicale de Paris.*

3. *Fracture of the Astragalus.* By M. Vollmar.

A strongly made countryman fell from eight to nine feet upon a threshing-floor. After the fall he was unable to stand any longer upon the left foot. Upon the removal of the boot, there was noticed a bony prominence in the arch of the foot; and the patient, imagining there

must be a fracture, applied cold lotions to the part to reduce the swelling. The foot was found in its natural position with moderate flexion.

In front of the articular extremities of the tibia and fibula there lay, under the raised integument, a bony swelling, separated by deep depression from the outer malleolus. No hollow, from which the bony mass had escaped, could be detected; the tarsal bones seemed in their normal relations. Extension effected the reposition of the displaced parts, and in four weeks the patient was able to go about, proper bandages having been maintained to keep the separated portions of the astragalus together.

Fractures of the tarsal bones are very rare. In 1024 cases of general fractures, Malgaigne noticed but 9. The os calcis is the most commonly injured.—*Ztsch. f. Chir. u. Geburtsh.*

OPHTHALMOLOGY.

1. *Congenital Absence of the Iris.* By Prof. Boeck.

Professor W. Boeck, of Christiania, publishes in *Hebra's Zeitschrift* an account of a family, four members of which laboured under this defect.

In the father, aged 52, there was no iris in either eye; the right lens was cataractous, the left cornea opaque.

In the aunt, aged 62, the right cornea was partly opaque, and there was incipient cataract; the left cornea was clear, but the lens of that eye was partially opaque and somewhat dislocated.

In the son, aged 17, both corneæ and lenses were healthy, and a reddish reflection was visible from the bottom of the eye. The patient was myopic, but his sight good in other respects; and he suffered no inconvenience from light. Both eyeballs were in constant oscillation.

The niece, aged 37, had the same deficiency of the iris; but her corneæ were nebulous and vascular. She could of course see but indistinctly, but had not lost the power of adapting the eye to different distances. This faculty, as our readers will remember, is understood to depend on the motions of the lens, effected by means of the ciliary body; and the latter may of course be present, and act well in the absence of the iris.

2. *The Ophthalmoscope of M. Anagnostakis.*

In the Association Journal for August 18, we find a full translation, by Mr. J. W. Hulke, of a memoir by M. Anagnostakis, descriptive of an instrument for examining the interior of the eye. From the article to which we refer, our readers will obtain some notion of the valu-

able revelations of the ophthalmoscope; and there can be no question that it is most interesting to be able to see the actual condition of the retina, and the other deep-seated parts of the eye.

We are, however, inclined to think that the *practical* benefit of this new means of exploring the eye will be found to consist in its enabling us to set aside cases in which the extent and the irreparable nature of the lesion forbids us to hope that treatment will be successful, rather than in directing the treatment in more manageable cases. In all the cases recorded, the eyes were evidently incurable, when examined in the usual way.

One principle, we conceive, cannot be too frequently impressed on our younger and more enthusiastic cultivators of pathological anatomy; namely, that treatment is to be directed much more by attention to the function of the part, and to the condition of the system, than by the local appearances. Take, for example, iritis: it is no doubt interesting to watch the lymph disappearing, the pupil rounding, the patches of blood vanishing; but our use of depletion, mercury, turpentine, iodide of potassium, etc., is to depend on the constitutional state of the patient—the pulse, the pain, the vital power; and we judge of our success day by day, chiefly by the returning vision of our patient. And it is the same with the retina: the pain and photopsia which indicate inflammatory irritation, the dull headache, muscæ, and hazy vision, which accompany congestion; the anæmia and exhaustion which are the concomitants of asthenia of the internal parts of the eye; the other circumstances in the history of the patient—worms, dyspepsia, loss of blood, over use of the eyes, etc., etc., will still, we suspect, afford our chief practical suggestions.

We must offer one hint also in conclusion. Let the eager ophthalmologists never forget that amaurosis may be induced or aggravated by imprudently pouring a concentrated light upon a delicate or irritated retina.

3. *On Phosphenes.* By M. Serres.

The obscure disease, amaurosis, seems now to be the special object of ophthalmologists. Another new method of exploration has just been formally suggested; it is the study of phosphenes!

It is a fact in pugilistry, that, if a man be smitten on the face, his nose will spout blood, his eyes flash fire. The former, a higher science informs us, is an objective fluid, capable of besprinkling the bystanders; the latter is mere subjective light, wholly useless in an economic point of view till M. Serres stepped in to "utilise" it. Pressure, applied to the eyeball somewhat more tenderly than the fancy man is wont to do, elicits, as is well known, a luminous spectrum, seen as if opposite to the point of contact; besides a faint secondary light upon the same side, the effect of counterpressure on the retina. These spectra are now called *phosphenes*, though we doubt not they would shine as brightly by many other names. According to M. Serres, the "phosphene" from pressure on the lower part of the ball is in shape like the

crescent moon; the "superior phosphene" is a crescent, whose horns enclose more than a semicircle; the tips of the "temporal filament" still more closely; and those of its "nasal" fellows almost touch one another.

Now, the science of phosphenes consists in this, that, as long as the retina remains sensitive, they can be elicited by pressure, how blind soever the eye may be from other causes; and thus absence of phosphenes is pathognomonic of amaurosis. Now, in the first place, be it observed that, by M. Serres's own showing, it is not thus pathognomic; phosphenes being absent in some people who can still see: but his explanation is, that they see with the *punctum lucidum*, and that the phosphenes are produced on the more anterior part of the retina. Moreover, it would seem that an unfortunate man, in whom phosphenes are impossible, may at any instant turn stone blind! In the second place, we beg to observe, that we set too high a value on the apple of our eye, and, by sympathy, on that of our patient's, to be forever squeezing it for diagnostic purposes, seeing that the pressure might in fact induce various amaurotic symptoms; and the rather so, that we are fortunately in possession of more perfect means of ascertaining whether the catoptric parts of the eye be in fault, and, by exclusion, fastening the crime of blindness on the retina.

To complete, however, the history of "*la retinoscopie phosphenienne*," we may add that, in progressive amaurosis, the phosphenes disappear in this order, from bad to worse—inferior—superior—frontal—nasal. Woe to the wight who has no nasal phosphene! During happy convalescence, "*le même ordre de réapparition dans sens inverse.*

4. *Paralysis of the Ocular Muscles.* By M. DEVAL.

M. Deval has lately published some cases in which he has, with more or less success, attempted the cure of paralysis of the rectus externus or internus by cauterising the superjacent conjunctiva with a pencil of lunar caustic. We need hardly add, that cases in which the strabismus is a mere symptom of cerebral lesion ought not thus to be meddled with; and we strongly suspect that the utility of the treatment will not on the whole prove very great.

5. *Dislocation of the Eyeball.* By Dr. BODKIN.

Dr. Bodkin has published in the *Dublin Medical Press* for June 14th, a remarkable case of complete extrusion of the eye ball. A robust woman, aged about 60, going out of her room in the dark, stumbled down a step, and falling against a door, had one of her eyes completely forced out of the orbit by the handle of the key of the door. The eye ball remained adherent to the upper lid merely by a shred of conjunctiva.

The editor of the above journal remarks that this is a very rare accident, which, if not verified by the best testimony, would scarcely be credited, so difficult is it to believe that such complete division of soft and yielding parts could be effected by so blunt an instrument.

6. ***Retinoscopy.*** **By Prof. Burow.**

Professor Burow, in *Müller's Archiv* for 1854, No. 2, advances a step in retinoscopy. In trying the well known experiment with a candle in a dark room, by moving which up and down close to an eye the observer obtains a sight of the vessels of his own retina, he found that, in favourable circumstances, he could get a distinct subjective view of his "macula lutea," also: and after describing some of the appearances of this *luftbild*, as he calls it, he ends by suggesting the possibility that patients, instructed in this mode of proving the state of their own retina, may be able to give their medical attendant useful information on its condition. Is not this next door to clairvoyance? German patients—*selbstsinnige*—*may* be able to perform this feat.

7. ***Hydatid of the Orbit.*** By Dr. Ansiaux.

In the *Annales d' Oculistique*, for August, Dr. Ansiaux records the following case. A boy, aged 8, was brought to him, having the left eye pushed upwards and inwards by a tumour seated at the inferior outer angle of the orbit; the tumour first perceived about six months before, was growing steadily. Some pain being felt in the site of the swelling, an incision was made, and, along with some fluid, a hydatid about the size of a hazlenut escaped. The tumour now rapidly subsided, and in the course of a fortnight the motion of the eye, which had been almost completely impeded, became natural.—*Periscopic Am. Med. Journal.*

THERAPEUTICAL RECORD.

Anæmia.—The following elegant pharmaceutical preparation, which would so frequently be useful in anæmia, phthisis and diseases of like character, is the method of Mr. Bastick of London, reported to the London Medical Society. We recommend it to our pharmaceutists as a valuable combination. Mr. Bastick proposes to unite quinine with cod liver oil in the proportion of two grains to the ounce. He styles the preparation "Oleum Morrhuæ c. Quinine," and it is best made in the following manner. The disulphate of quinine is dissolved in distilled water and a litle sulphuric acid. The quinine is then precipitated with an alkaline carbonate. The precipitate is then treated with boiling alcohol, and the alcoholic solution is filtered and evaporated to dryness, when the pure quinine is procured and added to the oil. The

mixture is heated in a sand bath until complete admixture takes place; the oil becoming perfectly transparent.

Biliary Calculi.—Dr. Bowditch, of Boston, believes that he has very much abridged the duration of the pain in such cases by lemon juice. The action is supposed to be similar to that of the nitro-muriatic acid bath. He remarks, also upon the similarity of that disease with duodenitis, and the relief which lemon juice causes in the latter.—*Bos. Med. and Surg. Jour.*

Coryza.—Dr. Lombard states that the severe pains in the nose and frontal sinus, attendant upon cold in the head, is easily relieved by the fumes of partially burned opium. One or two grains should be placed on a bit of sheet iron and held over a lamp, and the fumes inhaled through the nose.—*Brit. & For. Med. Rev. and Jour. Phar.*

Dysentery.—Dr. Davidson, of Burmah, (*Lancet*, April 1854) finds the free use of leeches to the anus the most reliable remedy he has ever tried in the dysenteries which are so common in that climate. The hemorrhoidal and mesenteric veins are thus emptied, and the disease cut short before running into the chronic stage.

Ovariotomy.—Dr. Atlee, of Philadelphia, reports (*Am. Jour. Med. Sciences*) thirty cases of ovariotomy. This immense experience in the most desperate branch of surgery has been acquired in the short space of ten years. It is equally interesting to notice the large proportion of recoveries,—seventeen of the thirty cases recovered and thirteen died. In three instances conception occurred after the operation.

Phthisis.—Dr. D. H. Storer, of Boston, reports two cases of phthisis treated by fusel oil, with apparent success. In seven months, first patient increased 20 lbs. weight, with marked improvement in the physical signs. The second case was even more satisfactory. The oil was given in doses of four drops, increased to six after each meal.—*Bos. Med. & Surg. Jour.*

Phthisis—Iodine Inhalations in.—We have often alluded to the inhalations of iodine, as practised by M. Piorry in the treatment of phthisis, and have frequently been asked what mode of inhalation he pursued. We find in the *Comptes-rendus* a very simple explanation of his method, which we give our readers. M. Piorry fears to go so far as to inject the vapour into the lungs, but has the iodine placed in wide mouth vials, hung about the bed and room, so as to charge the atmosphere with the vapors of the mineral. The curtains and bed-clothes will become blue, and by placing a bit of starched paper between the jar and the patient's mouth, it becomes blue, showing the passage of the iodine, whilst the air returning from the lung does not stain the starch paper, thus proving that the metal has been absorbed. M. Piorry claims great success for his practice.

Placental Presentations.—Dr. Bannister reports (*Bos. Med. & Surg. Jour.*) five cases of this deplorable condition, which fortunately rarely occurs, as these are the only ones met with in an experience of 3,500 deliveries. Dr. Bannister saved all of the five women by promptly delivering placenta, and turning, or pushing his way through and delivering at once. The last case died from neglect after three days had passed, and should be considered as successful so far as the operation is concerned.

Prolapsus Ani.—Mr. Lloyd, of St. Bartholomews, treats prolapsus ani with solid caustic, and has never known untoward consequences to ensue. His plan is to smear the protrusion with the caustic and return it. It not unfrequently happens that the bowel, which was so swollen as to prevent its return, becomes diminished so much in size as to be easily restored to its natural condition.

Pruritus Vulvæ.—The *calladium seguinum*, an Indian herb, is recommended by Dr. Sholz (*Arch. Gen. de Méd.*) as an admirable remedy for this distressing affection. This plant is one of the *aroideæ*. It should be used as an alcoholic tincture, and in doses of six drops.

Syphilitic Virus.—The prescription which we give below is proposed by Dr. Rodet, of Lyons, (*Gazette Hebd.*) as a certain protection against syphilis, neutralizing the poison and preventing all danger. It is only necessary to apply lint steeped in the liquid to the part inoculated by the virus, and permitting it to remain for one hour, when the protection is complete. We give the formula. ℞. *Aqua distill.*, 32 *grammes*—℥ixss.; *Ferr. perchlor., acid citr., acid hydrochlor., aa.*, 4 *grammes*—℥j.

Typhoid Fever.—In the April number of the American Journal of Medical Sciences, a new remedy is proposed for typhoid fever, by Dr. Leasure, of New Castle, Pa. He states, that having once made an experiment with the oil of valerian, in a desperate case of this disease, he has since frequently repeated it with much success in doses of one to two drops every hour. He believes that the valerian acts by rousing the nervous energies, which seem to flag so much during the progress of the fever.

BIBLIOGRAPHICAL RECORD.

I. *The Microscopic Anatomy of the Human Body, in Health and Disease.* By ARTHUR HILL HASSALL, M. B. Illustrated with numerous drawings in colour. With additions to the text and plates, and an introduction, containing instructions in microscopic manipulation. By HENRY VANARSDALE, M. D. Two volumes: one of text—one of plates. New York. 1855. S. S. & W. Wood.

2. *A Manual of Pathological Anatomy.* By C. HANDFIELD JONES, M. B., F. R. S., and EDWARD H. SIEVEKING, M. D. With three hundred and ninety-seven illustrations. Philadelphia. 1854. Blanchard & Lea.

Here are two important publications, one almost necessary to complete the other. Researches on general anatomy, either normal or pathological, have been so extremely multiplied of late years; so many laborious men have contributed to the progress of these sciences, that we must be thankful to the writers who have undertaken and executed the very difficult and long work of collecting the scattered materials, and of making a summary of them.

The book of Drs. Handfield Jones, and E. Sieveking is a very valuable one, both in a scientific and in a practical point of view; and the American publishers have tried their best to increase the value of the work by adding more than 200 illustrations to the already numerous illustrations of the English publication. But, although we thank them for these additions, we ought to say that they should have regarded more the quality than the quantity of illustrations, and that it would have been more useful to have the engravings better, than to have so many.

The work is divided into parts written separately, some by Dr. H. Jones, some by Dr. Sieveking. Dr. Jones is the author of the general pathological anatomy, and of the special pathological anatomy of the alimentary canal, the urinary apparatus and the joints. All these subjects and particularly what relates to the liver and the kidneys have been masterly treated. But the general pathological anatomy has not been, we think, exposed in all its capital points, and the writer has mixed with it perhaps too much of what belongs to general pathology. However even these questions which do appertain to his subject he has exposed with clearness and good reasoning, and sometimes has added important views of his own.

There is a question which he has particularly well exposed, and which is an important and a much debated one. It is whether fibrin is, as it has been very generally regarded, the plastic material, *par excellence*, from which all the tissues are formed, or, if it is a principle comparable to creatine, urea, etc., and resulting from the waste of the tissues. Although inclined to admit this last opinion, Dr. Jones has remained somewhat undecided. Very likely he would have been more positive had he known the two following facts discovered by Dr. Brown-Séquard: 1st. If in a limb separated from the body of an animal or a man, defibrinated blood is injected, when the nerves and muscles have lost their vital properties, and even when the muscles have become rigid (having the so-called *rigor mortis*), this blood, although deprived of fibrin is able to nourish the muscles and the nerves and give them again their vital powers. Still more, as long as such a blood will be injected (and in one experiment this has been ascertained for more than 41 hours) the vital properties will be maintained. This certainly proves that fibrin is not necessary for the nutrition of muscles and nerves; 2d. When defibrinated blood is injected in the arteries of a limb, (the blood-vessels of which have been well washed of their contents,) the blood that comes out from the veins contains fibrin. So that fibrin is produced either in the circulating blood, or in the tissues from which it passes into the blood.

Besides these facts, Dr. Séquard points out that there are two organs, at least, in the body, one of the functions of which is to decompose the fibrin of the blood, to expel its elements, or form with them some principles which very likely all go out from the blood. These organs are the liver and the kidneys.

The obscure subject of the nature of inflammation has not received much light from the article of Dr. Jones about it, but the questions are clearly exposed, and the actual state of science well appreciated.

Dr. Jones has spoken of cancers, in many respects, more as a man of the old school than as a micrographer; but, the American editors have added to this part of the book a remarkable paper on this subject by Dr. Donaldson, of Baltimore, in which will be found many important points, as regards the use of the microscope to detect cancer.

Dr. Jones has exposed with great talent the pathological anatomy of the liver and kidneys. What he says of the causes of the production of fatty liver is very important, and if he is right, the following lines are worth quoting because they may prove very useful to practitioners:

"The proximate cause of fatty liver, is we believe, the existence of an undue quantity of oily matter in the blood, in proportion to the assimilative power. In cases of disease it is also very probable that the vital power of the hepatic cells is much lowered. It may therefore occur; 1st. When an animal is largely fed on food containing much fat; 2d. When in the course of an exhausting disease rapid emaciation takes place and causes the blood to become loaded with oil from the waste of the adipose tissue; 3d. When the type of respiration is low, and the blood necessarily therefore contains much hydrocarbonous matter. In the first and third class there may be simply accumulation of

a large quantity of oil in the tissue of the liver; in the second there is generally also more or less degeneration of the hepatic structure. We have verified this by positive observation as respects the first and second class. Animals fed for some time with fatty food, have their livers loaded with oil; but the cells are not at all destroyed; they contain much oil, and much also is deposited between them. We have found the liver in persons dying in a condition of extreme emaciation from other diseases besides pulmonary phthisis, in a complete state of fatty degeneration, and this has occurred so often that we should expect to find it in most cases of great general wasting. It is certainly the emaciation of consumptive disease that produces fatty transformation of the liver, and not the mere destruction of the oxygenating apparatus. This statement is strongly confirmed by the analysis of about a hundred cases, in which we examine microscopically the condition of the liver. Among them there were eighteen in whom the liver was thoroughly fatty or nearly so; of them, only one died of pulmonary phthisis, four others of scrofulous affections, the remainder of diseases having no connection with any form of phthisis; ten cases of phthisis occurring in the same list, presented either no fatty degeneration, or an imperfect and partial change only."

Dr. Sievcking has treated the parts relative to the pathological anatomy of the nervous system, of the organs of circulation and respiration, of the female organs of generation and of osseous system. We will point out as very remarkable what relates to the nervous system.

Dr. Hassall's book has been begun long ago, and, although Dr. Vanarsdale, of New York, a very able practical micrographer, has added valuable notes to the English edition of this book, it is much behind the times. However, the number of plates, their beauty and some other peculiarities, give to this work a special value, and certainly render it worth having. Another capital reason of success, particularly for physicians not yet much accustomed to microscopical research, is, that the introduction of the American editor, Dr. Vanarsdale, is a clear and precise summary upon the microscopes, and the preparation and conservation of microscopic objects. Besides this, after each article on a tissue, or a liquid of the animal economy, Dr. Vanarsdale has exposed the best means of examination, of preparation, and of conservation, of the tissue or liquid.

II. *Principles of Physiology.* Designed for the use of schools, academies, colleges, and the general reader, etc. By J. C. Comstock and B. N. Comings, M. D. New York: S. S. & W. Wood. 1855. 4to.

This is a money making book, of which we shall not say anything, except that the plates might have been less inexact. We do not think that because a book pretends to teach science only to ignorant people (as the general reader, etc.), it is entitled itself to be as ignorant as these people. The images (and particularly a very comic one, which is

said to represent the spinal cord,) and many parts of the text, are quite equal in inaccuracy.

III. *Essays on Infant Therapeutics;* To which are added, observations on ergot, history of the origin of the use of mercury in inflammatory complaints, together with the statistics of the deaths from poisoning in New York in the years 1841, '42, '43. By JOHN B. BECK, M. D., Professor of Materia Medica and Medical Jurisprudence in the College of Physicians and Surgeons in the University of the State of New York, &c. &c. Second edition.

The above is a collection of essays, in a neat little volume of 168 pages. The first and principal essay is devoted to the therapeutical action, on young subjects, of opium, emetics, mercury, blisters and blood-letting. While we regard the observations of Dr. Beck on these topics as very interesting and practical in the main, and his facts as valuable, we must say that the deductions drawn from the facts are not always legitimate. Because a child dies from taking one drop of laudanum in diarrhœa, it is not fair always to conclude that death was produced by the laudanum; or, if a young man who was afflicted with "violent spasmodic disease," of considerable duration, and who was in the habit of taking large doses of opium every night, should on one of those nights succumb, it does not follow, as a matter of any certainty, that the opium produced the death.

This essay is intended only to pourtray the unfavorable action of the remedies mentioned, not strictly their therapeutical or curative effect. It, together with the other essays, will well repay the perusal of the medical man.

EDITORIAL AND MISCELLANEOUS.

The Annual Meeting of the Medical Society.

The Medical Society of Virginia held its annual meeting in its hall in this city, on Tuesday the 24th of April. We will give our readers a rapid sketch of the events of the session, in this number. Our notice must of necessity be very imperfect, as the minutes have not yet been prepared by the secretary, and we therefore depend on memory, and the reports in the daily papers, for our information.

We were sorry to see so few persons present, for surely in a society numbering 450 members, there must be a woful lack of interest, when it is found almost impossible to collect together more than its meagre quorum of twenty. The average attendance was about that number, amongst whom we noticed *six* physicians, non-resident in Richmond.

We must also call attention to another melancholy fact. After a session of two days, the society adjourned to meet Norfolk on the *fourth* Tuesday in October, leaving behind it not one single scientific contribution to be entered on its record, not one fact of interest or use to the profession.

Let the friends of medical organization in Virginia ponder well these sad truths, and earnestly seek an effectual remedy for this disgraceful apathy. It only requires an energetic movement on the part of the profession, and this association may yet fulfil all the fond anticipations of its founders. Will they not make the effort?

Dr. WORSHAM of Dinwiddie, one of the vice presidents of the society assumed the chair, and with much dignity and courtesy presided over the deliberations, and yet, to every member present, how painful was the realization of the mournful tragedy which had occurred, since they last met in that hall. They well remembered the unanimous selection of one of their worthiest associates as their presiding officer; his manly earnest words when he assumed the duties of the office, and assured them of his determination to do his duty faithfully and impartially; and now his seat is vacant, the waves of ocean roll over his remains, and nothing was left for them but to offer up a few resolutions as a feeble tribute to his memory. By a unanimous vote the society resolved to obtain an accurate and well executed portrait of CARTER PAGE JOHNSON to be suspended in their hall, as a permanent memorial of their respect and affection. The funds necessary for this purpose are to be raised by voluntary contributions, and the chairman of the committee appointed by the society, Dr. MCCAW, would be happy to receive the subscriptions of all those who desire to unite in this laudable object.

A proposition for the appointment of a committee to memorialize the legislature on the subject of quack medicines elicited some interest and a prolonged discussion. The society determined to appoint such a committee, but afterwards reconsidered its action and declined to press the memorial on the legislature. The amount of time and intellect which was expended on this proposition, if it had been directed upon a scientific

question, would have resulted in something both creditable to the society, and instructive to its members.

Dr. TUCKER, Chairman of the "Prize Essay" committee reported that no paper had been presented worthy of a prize. If gold metals and honorable testimonials will not incite ambition, and elicit contributions to the literature of our science, how great must be the necessity for a periodical literature, which by its incessant appeals and constant remonstrances, may at last shame our laggard profession, and rouse the medical men of Virginia to the performance of their duty.

Dr. BOLTON the treasurer of the society, reported the treasury to be in better condition than it has been for many years. It is to be regretted that Dr. B. was forced to decline a re-election to this office, which he has faithfully filled for so long a period.

The appointment of delegates to the American Medical Association consumed a good deal of the time of the society, and was followed by the election of honorary members. The following gentlemen received this compliment: Drs. Atkinson of Danville, Minor of Brooklyn, New York, D. Humphreys Storer of Boston, and Gerhard of Philadelphia.

A report was offered by the Publishers of the Stethoscope which was received by the society. Whilst this project had not fulfilled the sanguine anticipations of its friends, it had diminished the large debt of the society due for its purchase by about 400 dollars, after paying all its expenses.

The society proceeded to elect officers and the following gentlemen were appointed:—

President.—Dr. H. C. Worsham of Dinwiddie.

Vice-Presidents.—Drs. C. Bell Gibson of Richmond, Wm. Craighead of Danville, George L. Upshur of Norfolk, John S. Davis of University of Virginia, George T. Yerby of Northampton, and P. C. Spencer of Petersburg.

Recording Secretary.—Dr. Theo. P. Mayo.

Assistant Recording Secretary.—Dr. Wm. P. Hill.

Corresponding Secretary.—Dr. Wm. D. Haskins.

Assistant Corresponding Secretary.—Dr. Wm. E. Wilson.

Treasurer.—Dr. Charles E. Anderson.

Librarian and Curator.—Dr. Peterfield Trent.

Committee on Nominations.—Drs. F. W. Deane, Jas. Bolton, Albert Snead, J. A. Cunningham and George G. Minor.

Local Executive Committee.—Drs. R. G. Cabell, James B. McCaw, J. A. Cunningham, A. T. B. Merritt, C. S. Mills, and ex-officio the Officers of the Society.

The election of editors to the Stethoscope for the ensuing year was now proposed, and Dr. GOOCH suggested that instead of the original plan of electing seven editors, their number should be reduced to two. Drs. BROOCKS and BOLTON argued that one editor, with such salary as the journal could afford to pay, would be preferable. To this proposition the society assented. Dr. Bolton nominated Dr. R. A. LEWIS; Dr. Tucker nominated Dr. W. D. HASKINS. Dr. Haskins was elected. The society adjourned until Wednesday morning.

On Wednesday, at 10 o'clock, A. M., the society was organized, Vice President GIBSON in the chair. It was ascertained that the publishers of the Stethoscope declined to permit any portion of the assets of that Journal to be diverted from the original purpose agreed on, and insisted that the debt due them should first be liquidated. The publishers also agreed to take the Stethoscope from the Society at cost, thus relieving it from all responsibility. This was declined, but a committee was appointed to effect a sale of the journal.

The Society, on motion of Dr. G. A. WILSON, determined to sell the Stethoscope at public auction after giving ten days notice, and Drs. Wilson, Haskins and Mayo were made a committee for that purpose.

Drs. Lewis, Peebles and Upshur were appointed a committee on the Prize Essay for the next year.

Various other matters were acted upon by the Society, which will be noticed in our detailed account, but want of space now compels us to pass them by. The Society adjourned at 10 P. M. on Wednesday, to meet in the city of Norfolk in October.

The Puff Biographic and Lithographic.

Reader, did you ever hear of the Puff Biographical? We doubt it much, for indeed it is an invention of modern days. It is time unsophisticated country friend, that you should become acquainted with this elegant accomplishment, and therefore let us introduce you to a royal road to fame, a short cut to a reputation.

"When the ingenious Mr. Puff," says an English cotemporary, "enumerated before his sneering, but diverted audience, the various

arts of practitioners in panegyric, or professors of puffing, and dilated with all the affectionate partiality of an author, upon the puff direct, the puff preliminary, the puff collateral, the puff collusive, and the puff oblique, he evidently thought that the art he professed had been brought to a state of perfection. Poor Puff. He would have straightway hanged himself, could he have foreseen how he would have been surpassed in the nineteenth century, by the invention of the puff biographical."

This new invention loses much of its power, unless intimately associated with the puff by lithograph. The theatres early seized upon this idea, and the play bills presented in life-like characters "Mrs. Farren in her splendid part of Ophelia," or, "charming little Bateman as the Newsboy." The political journals soon followed, and embryo senators, or would-be presidents, stared placidly on admiring constituents from their leaden pages. Then the literary editors armed their hooks with this tempting bait, and "our best contributor," among the poetic minnows, wriggled to the frontispiece, where azure maidens or hyacinthine novelists, kept them company.

The puff by lithograph at length brought its seductive influences to bear upon the medical profession, and the first symptoms of its approach towards physic are still vividly before us. Who does not remember kind hearted Dr. Sherman distributing his delicious "worm lozenges" to groups of weeping children, or the venerable Townsend upon his errand of mercy, driving disease before him by the magical power of his sarsaparilla. The temptation was irresistible, and various English journals began to take the lives and perpetuate the features of living medical celebrities. Even such men as Brodie and Chambers acknowledged the soft impeachment, and yielded to the witching influences of this new titillator, until, at last, the profession arose in its strength, and with one burst of mighty indignation, stamped this gross quackery with the seal of its reprobation.

Our American editors lost but little time in appropriating to themselves the wondrous discovery, and behold in all directions the lithograph at work. Great men, as plenty as mushrooms, spring up on every side, and the ancient fathers in medicine are completely eclipsed by the brilliant coinage of this admirable invention. Here comes a president of an association or society, there a professor in some unknown college. The "machine" is soon improved with the characteristic ingenuity of our people, until, at last, it is enabled to furnish a "distin-

guished physician" or an "admirable practitioner" upon the shortest notice, and all done in the highest style of art. The puffs biographical accompanying them, it must be confessed, are very meagre imitations of their English predecessors, but this defect is more than atoned for by the expression imparted to the portraits, which have undoubtedly acquired for the worthy originals a hideous immortality. We only fear that the descendants of our much wronged friends, will some day or other collect all the remnants of these "Medical Books of Beauty" (which the trunk maker may have spared) and consign them to a fiery grave, as disgraceful caricatures of their honored ancestors.

It is very evident that our cotemporaries comprehend human nature, for truly say'st thou, O! Fennimore Cooper, that there is in us a natural tendency to look at men who have become distinguished, from Nebuchadnezzar to Old Hickory. How we all crowd to see great Mr. Rigmarole, the distinguished male; dear Mrs. Rigmarole, the distinguished female! Splenetic Carlyle adds, that there is, moreover, "an instinctive desire in men to become distinguished, and be looked at!" How gracious the editor who satisfies this desire! How happy the admired and how delighted the admirers! O Fortunati beatique!. How —but we have used up all our printer's notes of admiration, and must close.

New Appointments in the Medical College of Virginia.

The visitors of the Medical College of Virginia convened in Richmond on the 30th of March last, to fill the anatomical chair in that institution, made vacant by the death of the lamented Johnson. We regret also to state, that the resignation of Dr. Brown-Séquard, as the Professor of the Institutes of Medicine, was received and accepted by the Board.

The result of their deliberations was the election of Dr. A. E. Peticolas, of Richmond, to the chair of Anatomy, and Dr. Levin S. Joynes, of Accomac county, as the Professor of Physiology and Medical Jurisprudence.

Dr. Peticolas, a Virginian by birth, is a graduate of the institution, and has devoted the whole of his professional life to the advancement of its interests. He became the Demonstrator of Anatomy immediately on his graduation, and, without doubt, has done the college good

service. His accomplishments as an artist, and his accuracy as an anatomist, have been equally displayed in the beautiful plates done in oil, of the important regions in surgical anatomy, which ornament the museum, and we feel certain that, with his ambition and energy, the trustees will have no cause to regret their appointment.

In the selection of Dr. Joynes, the visitors have been fortunate in obtaining the services of one who has already occupied the chair of Physiology in one of the Philadelphia Colleges with great credit. Whilst we regret that this appointment should have been made without giving the usual notice to the profession, yet we do not believe that any delay for such a purpose, would have enabled the board to have chosen a gentleman better qualified in every respect for this important position.

Professor William Gibson, of Philadelphia.

One of the notable events of the present year is the retirement of Dr. William Gibson, the veteran Professor of Surgery in the University of Pennsylvania, from the chair which he has occupied, with no little eclat, for *thirty-six* years.

The trustees of that institution, with great propriety, conferred on this aged servant the complimentary appointment of *Emeritus* Professor of Surgery, whilst the class which sat during the late term, under his teaching, propose to obtain his portrait, which is destined for the Wistar Museum.

Report brings us the names of Henry Smith, Norris and Brainard, of Chicago, as prominent candidates for this important post. We may be permitted to express the hope, that, the chair once held by Physick, and just vacated by Gibson, will not be filled by one unworthy of these illustrious predecessors.

Dr. Draper's Suit for Libel.

We notice the northern journals, alluding to the suit for libel brought by Prof. Draper, of the New York University, against Dr. D. M. Reese, of the New York Medical Gazette, for defamation of character, and we must regret that a spectacle so derogatory to the dignity and

character of the profession should be brought before the public. Whilst it is the duty of the medical press to speak boldly against the abuses and short comings of the schools and the profession at large, it should beware lest it permits itself to degenerate into the licentiousness of newspaper warfare, and thus render those journals, claiming to be the exponents of science, nothing but foul mouth-pieces for retailing personal slanders and misrepresentations.

Dr. Draper's complaint is, that Dr. Reese permits a correspondent, whilst making a series of attacks on the University of New York, to state, amongst other things, that Dr. Draper, the president of that faculty, was not a medical man, and indeed had no medical degree,—save the honorary one conferred on him by his own college. Dr. Draper being a graduate of the University of Pennsylvania in the year 1836, requests a withdrawal of the false statement, which is declined, whereupon a suit for libel is commenced.

It is of slight importance to us, in Virginia, where Dr. Draper resided years ago, and has yet many friends, whether he is a graduate of medicine or not. We know that he has spent a lifetime in the study of the special science to which he has linked his name by too many honorable contributions, to permit him to be forgotten in its history. There is no man in America who has made so broad a mark on modern chemistry as John W. Draper; and we, who have sat under his teaching, and remember well the original and brilliant theories which we have heard in his lecture room, cannot now refrain from deprecating, in the strongest terms, this uncalled for and unwarrantable attack.

N. B.—Since the above article was penned, we have received the May number of the Medical Gazette, in which its editor Dr. Reese withdraws his charge against Dr. Draper. We think it an act of justice to Dr. Reese that his card should appear in our columns.

Correction.—We owe to Dr. John W. Draper, the President of the Medical Faculty of the New York University, the prompt correction and retraction of the statement made in our last number by a correspondent, that he was "not a medical man, had no medical education, and was only called M. D. by its honorary reception," &c.; as we have since learned that he graduated in 1836 at the University of Pennsylvania, after the usual collegiate requirements, and the impeachment of his professional status in our columns was therefore an injustice, entitling him to this public reparation. This is due to ourselves and our readers, not less than to him, and is prompted solely by our own sense of right, uninfluenced by the menace

he has published, thereby forfeiting all claim to our courtesy. "We had rather be right than be President."

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*Lent in a Hygienic Point of View.**

Some philosophers have thought that the Roman Church, in instituting the fast of Lent, had regard, not only to the moral, but to the physical well-being of her children. Admitting that this double object was had in view, and that periodical abstinence is in reality conducive to the maintenance of the public health, we naturally enquire what diseases it prevents, and how far the effects respond to the philanthropic design? And thus a scientific interest invests an institution which is usually presented to us in the purely religious aspect of a propitiatory mortification.

As a general thing, men are made to do right by two methods only: either by persuasion or compulsion. It appears that in old times the first of these methods did not always ensure the observance of Lent; that all christians did not appreciate the hygienic advantages of abstinence, and that it was necessary to enforce the regulations of the church by the second means to which we have alluded. An edict of Charlemagne did this under pain of death. Erasmus writes that "the person who, during Lent, ate flesh instead of fish, was dragged to punishment almost as if he was a parricide." This law, though its penalty was scarcely ever enforced, remained upon the statute-book until shortly before the Reformation.

After Luther, setting the laws of the Church at defiance, had authorized his disciples to eat what they chose at all seasons, the Pontiff thought best to make some concessions in regard to the observance of Lent, at least as far as military men were concerned. Among others, the soldiers who were besieging the Huguenots in Orleans, were permitted, at the solicitation of Count Sipierre, to use meat several times a week.

But the relaxation of ecclesiastical discipline in camps did not extend to civil life, and though the punishment of death decreed by Charlemagne was abrogated towards the close of the reign of Francis I, yet whoever ate meat (*faisait gras*) at prohibited times was prosecuted as a heretic, and condemned to some public penance. Brantôme relates that "in a certain city, a young woman walked in a procession during Lent, bare-footed and with a most sanctimonious countenance. The ceremony over, she went to dine with a friend on a quarter of lamb and a gammon of bacon. The savoury odour was perceived in the street. The woman was arrested, and sen-

* The above article, which will be interesting to readers of all denominations, is translated from a *feuilleton* in the *Gazette des Hôpitaux*, by Dr. Champouillon, professor of Hygiene at the military hospital of Val-de-Grâce.

tenced to promenade the town, with the lamb on her shoulder, and the gammon hung from her neck."

To preserve his subjects from temptation, Henry II, in 1549, forbade butchers, game-dealers, or public cooks to sell meat during Lent, even to heretics. Charles IV, amended this law in favour of invalids, but the purchaser was required to present a certificate, stating the disease, and the kind of meat ordered by the physician. These regulations remained unchanged till towards the close of the eighteenth century.

Since the revolution of 1789, every one in France has been at liberty to follow his own tastes in this matter, or to obey the scruples of his conscience.

In early times, Lent was indeed a fast. The regulations of the Church prohibited eggs, milk, butter, and cheese, in consequence of their animal origin. But, during the sixth century, this severity was relaxed, and poultry, water-fowl, and amphibious animals, were allowed to be *maigres*. In fact, in the description of the creation, in Genesis, it is recorded that on the fifth day God commanded the waters to bring forth fish "and fowl that may fly above the earth," and this text, liberally interpreted, might be supposed to assign an identical origin to these two species of animals, and to make it proper to use either of them on days of abstinence. Several fathers, St. Basil, St. Thomas Aquinas, St. Ambrose, among others, were of this opinion.

It was doubtless pleasant for the faithful of those remote times to practice self-mortification while eating of the delicious flesh of wild-fowl and chicken. But the Church soon became less tolerant, and discovered that this agreeable diet was anything but orthodox. In 817, a Council at Aix-la-Chapelle declared that poultry was indeed flesh (*aliment gras*); but the same Council authorized the use of some amphibious quadrupeds, as *cold-blooded* animals. Such subtleties do credit only to the spirit of controversy; in our day, we very properly regard the blood of a black-diver or otter as quite as warm as the blood of a puddle-duck or sheep.

After all, the history of the customs of a people is little else than a history of contradictions. We are surprised that our ancestors avoided pork on fast-days, while they ate vegetables prepared with lard; who knows but that our descendants will be equally astonished on learning that we feared to eat duck on a *jour maigre*, while we dined heartily on water-fowl.

We find little in the records of medicine in regard to the prophylactic efficacy of Lent, and in the lack of evidence from this source, we are forced to turn to clinical observation and to physiology for proofs of a fact which has hitherto been only conjectured.

In enumerating, according to their importance, the causes proper to certain inflammatory affections, pneumonia, rheumatism, and gout, more par-

ticularly, authors generally have not assigned to alimentary regimen its due etiological value.

Undoubtedly cold is a cause of inflammations of the joints and of the pulmonary tissue, but, notwithstanding the opinion of MM. Bouillaud, Chomel, and Grissolle, it is by no means certain that it is their most frequent cause. The fact that pneumonia, for example, is less common in winter than in spring, proves that cold has only a secondary influence in producing this phlegmasia. To recite only my own observation in the army: of 274 cases of frank pneumonia which have been in my wards in the last thirteen years, 209 entered in the months of March and April. And the same coincidence, and the same relative proportions were observed in my cases of rheumatismal arthritis and gout.

The predilection of inflammatory diseases for the spring, is said to be explained by the extent and frequency of the thermometric changes at that season. But that interpretation, taken in its absolute sense, does not agree with facts or theory.

If the sudden passage from heat to cold suffices to induce pneumonia, how does it happen that our soldiers, going out from an overheated barrack to mount guard for two hours, only contract a simple bronchitis or diarrhœa? How is it, in the cold and icy nights of the north of Africa, that our men, who bivouac in the open air, awake so rarely with pneumonia ?* M. Lesson tells us that in forty years of sea-service in the most opposite latitudes, he never saw a sailor affected with acute rheumatism or inflammation of the parenchyma of the lung; and Parent-Duchâtelet states that these affections are not more common among tanners, boatmen, washerwomen, bakers, and bath-keepers, than among labourers who are not exposed to vicissitudes of temperature.

A sudden chill may undoubtedly induce inflammation of the joints or lungs, but a certain condition of the economy must exist, in order that this may occur, a condition most common at a particular period of the year. This predisposition is said to be connected with the age, temperament, or idiosyncrasy of the patient. But these are remote influences, of far less importance than the special influence of the spring and qualities of the blood derived from the regimen of winter. During the cold season, the individual has kept up the function of calorification by the aid of animal food and aromatic or spirituous drinks, and these bromatological habits increase the proportions of albumen, fibrine, and globuline in the blood; the system becomes plethoric, and a morbific stimulus affects the ligamentous tissues.

* M. Maillot had only six cases of pneumonia in 3765 patients whom he treated in the province of Bone.

Excessive functional activity increases the susceptibility of organs to morbid influences. Now, during the winter months, pulmonary combustion goes on with great energy, and the respiratory apparatus is the seat of an excessive afflux of blood. Thus, by different causes, the organism is brought to the verge of irritation. Then the vernal stimulus supervenes, an ill-defined, occult, but real influence, affecting everything in nature that lives and breathes. At this season, local phlegmasiæ are developed, according to idiosyncrasy, in the form of pneumonia, rheumatism, or gout. Numerous clinical observations have convinced me that exposure to cold is not a necessary condition in these manifestations, though it is an exciting cause sometimes.

Physiological researches prove that a vegetable diet reduces the solid constituents of the blood, and experience demonstrates that such a regimen promptly corrects the effects of the plethora of winter. Religious corporations that practice abstinence and fasting during Lent, furnish few examples of pneumonia, gout, or articular rheumatism. In 7405 dominicans, carthusians, and novices, inhabiting the north of Europe, I found these diseases approximately fourteen times less frequent, than in classes of society exempt from the observance of Lent.

"Metempsychosis was invented for the climate of India," says Montesquieu, "where the fields are parched by the excessive heat. Cattle can only be raised in small numbers, barely adequate to till the earth. Therefore a law of religion which prohibits animal food is very suitable in that land." We say, that a law of religion which imposes on robust Europeans forty days of abstinence and fasting, is perfectly adapted to the prophylaxis of rheumatism, gout, and pneumonia.

Editorial Correspondence.

Mr. Editor:—There has been much discussion among the erudite, on the question of priority in the operation for resection of the lower jaw. The honor of it is attributed by Cooper, in his dictionary, to Dr. Mott; by Blackman to Deadrick, of Tennessee; and by surgeons generally to Dupuytren. This controversy may be regarded as settled by the establishment of the three following points, of which those who choose to seek for it will find ample evidence:

1. That although vague accounts of resections of the inferior maxilla are contained in ancient authors, the removal of considerable portions of this bone is an achievement of modern surgery, and that Deadrick deserves the credit of introducing it into practice, on account of the operation which he successfully performed in 1810. (*Am. Med. Recorder*, July 1823.)

2. That DUPUYTREN, who operated Nov. 30th, 1812, brought the operation to the notice of the great surgeons, and that his authority established it as a remedial means. (*Leçons orales*, T. iv.)

3. That the first recorded case of disarticulation of the jaw belongs to PALMI, who operated in 1820. (*Koch's Thesis.* Jæger, *Operat. resect.*) GRAEFE repeated the operation in 1821; MOTT on May 15th, 1822; CUSACK, in 1825. Mr. South maintains, and it appears with justice, that Anthony White successfully removed the lower jaw at its condyle, in 1816; but the case was not published.

We may be proud to claim this operation for our countryman, for it is indeed a surgical conquest. Until Deadrick demonstrated its practicability, an individual with an osseous tumour or cancerous degeneration of the lower jaw, was doomed to almost certain death. Even in 1839, Velpeau enumerated 120 individuals who owed their lives to this operation, and at the present day this list might be more than trebled. Dupuytren's first patient, the coachman Lisier, was in excellent health as late as 1851. An operation which has preserved hundreds of lives, may be justly regarded as a blessing to humanity.

It is not difficult to conceive of cases in which the disease can only be eradicated by extirpation of the entire jaw. This is the *ne plus ultra;* and it is not to be supposed that surgeons who are ever striving to reach the limits of the possible, should fail to attempt it. They have not: and a new controversy has arisen as to who attempted it first.

It is said that Walther, of Bonn, (*Arch. gén. de Méd.*, T. ii., p. 446) accomplished this feat; but from some cause authors have treated this case as apocryphal; and latterly two famous operators, Maisonneuve and Heyfelder, have respectively claimed priority. The physician to the English embassy at Paris interposes between these combatants with Dr. Carnochan's "amputation of the entire lower jaw," performed in 1851, and sets their pretensions definitively at rest.

I have been informed that Dr. Warner, of Richmond, removed an enormous osteosarcoma of the lower jaw, disarticulating both condyles, as early as 1846; that the patient is still living, and that the preparation may be seen in the museum of the Medical College in Richmond. I have not been able to find the case on record, and should be glad to learn whether the facts have been communicated to me correctly.

Every one who has seen much of operations on the lower jaw, must be aware that its removal when necrosed is a much simpler proceeding than the same operation when the bone and soft parts are involved in cancerous degeneration. In respect to its difficulty, therefore, as well as its date, Dr. Warner's operation, if authenticated, should take precedence.

CHIRURGUS.

The operation of Dr. Warner, alluded to by our correspondent, was performed at the Richmond Medical College in 1846. We do not think it was ever put on record, but we have obtained its history from an eye witness and assistant, which we vouch for as correct.

Dr. Warner did *not* extirpate the entire lower jaw, and therefore the question of priority cannot arise with Dr. Carnochan. His operation consisted in the removal of an immense osteosarcoma, at least nine inches in circumference, and involving the entire lower jaw, with the exception of about one inch on each side, of the ascending ramus. The operator determined, at one time, to take out the entire jaw, but on finding the condyles of the bone sound, he permitted them to remain, so as not to interfere with the muscular attachments. This was much the largest operation ever performed on the lower jaw at that time, and the patient still lives, as a monument of the skill and professional knowledge of the lamented surgeon.

VARIETIES.

HOMŒPATHY AND THE MICHIGAN MEDICAL SCHOOL.—The Medical department of the University of Michigan is on the free system. The Professors receive salaries from the State. The lecture term is six months. There are other good features in the management of this institution. We have already applauded the enterprise and wished it well, while some of our Virginian 'Reformers' have held it up as a model of excellence. But alas for those who put their trust in legislatures! The sapient law-makers of Michigan have passed an act requiring the Regents of the University to place an homœpathist in one of the professorial chairs. The *Peninsular Journal* informs us, however, that the Regents will refuse to perpetrate this outrage on decency and common sense.

THE CURARE POISON.—The composition of this formidable agent seems to be a problem which toxicologists cannot solve. Whether it is an animal or vegetable product, or a mixture of toxic substances, cannot be determined satisfactorily. Our eminent countryman, Dr. Daniel Brainard, has found its effects identical with those of the venom of the rattle-snake, and states, in a paper presented to the Institute of France (Feb. 27th, 1854), that both of these poisons are neutralized by iodine. On this occasion, the learned chemist, M. Boussingault, observed that the prevalent idea that the active principle of curare was

the venom of a species of serpent, was probably erroneous. He had seen this poison prepared by the Indians on the tributaries of the Amazon. They obtained it by macerating the bark of a liane (*rejuco*), very common in those forests. It was with this same curare, sent in 1833 to M. Pelouze, that M. Bernard had made his experiments. M. Boussingault added that in M. Humboldt's description of the preparation of curare, no mention was made of its containing the venom of serpents as an ingredient. Prince Charles Bonaparte stated, in reply to an intimation that the curare used in Dr. Brainard's experiments was obtained in *North* America, that he himself had furnished it.

Testimonials.—The French government has presented Surgeon Williamson, U. S. N., and Dr. James Harrison, with gold medals, as acknowledgments of their humane services to the crew of the steamer *Chimere*, at Norfolk, during the prevalence of yellow fever on board.

South Carolina Medical Association.—The usual anniversary meeting of this body was held in Charleston on the 5th of February. Dr. W. Mobley read an address on *Typhoid Dysentery*. Dr. Gaston read a description of his method of treating *Uterine Displacements*, and exhibited a pessary of his invention. Dr. Gibbes, sen., communicated an essay on *Pseudarthrosis*. Dr. Simons communicated the results of his treatment of surgical cases manifesting a gangrenous tendency, by *Pyroligneous Acid*. There are other communications of less importance, which were referred to the Committee on Publication. With a view of enlisting the sympathies of the physicians throughout the State in the Association, it was determined to hold extra meetings in towns in different parts of the State. Dr. E. Hoelbach, of Charleston, was elected presiding officer for the ensuing year.

New York State Medical Society.—The forty-ninth annual meeting of this Society was held at Albany on the 7th, 8th and 9th of February. There were sixty delegates or permanent members in attendance. Papers were read by Dr. Armsby on extra-uterine conceptions, Dr. Phelps, on dislocations of the femur, Dr. March, on hare-lip. Several remarkable cases were reported, pathological specimens exhibited, and accounts of epidemics in different districts presented. Biographical sketches were read, and "The Profession" was well talked over. Dr. March explained the circumstances attending the death of Miss Weaver (to whose case we have alluded), and corrected misrepresentations which have been made to his disadvantage. Dr. Horace Green read a remarkable paper on "Cauterization of the bronchi, and the treatment of tuberculosis by injections of nitrate of silver into the tubercular cavities of the lungs." Thirty-two cases were noticed as having been treated since October 1854, all of which, with one or two exceptions, had been benefitted by this topical treatment. One of the exceptions, Dr. Adams (of the *N. Y. Med. Times*) tells us, refers to a case in which the operation proved fatal in less than 48 hours, a fact which we mention by way of warning, not of censure. The materials brought together at the session, will suffice, we should think, for a very respectable volume of *Transactions*.

American Medical Society in Paris.—This Society was organized in November 1851, by American physicians resident in Paris. Its objects are: to support a reading-room, supplied with American Medical Literature, and open to physicians of all nations; to discuss medical topics at stated meetings; to diffuse a knowledge of American contributions to science; and furnish information to compatriots on their arrival in Paris. The society has rooms at No, 6. Rue des Quatrevents, which are open day and evening. Physicians from the United States will find this a pleasant resort, and will do well to unite with the members of the society. Authors and editors who feel disposed to aid in the laudable objects of this association can do so by sending them (*carriage paid*) to the care of Mr. Edward Bossange, 138 Pearl St. New York, by whose generosity they will be forwarded.

The Interrogative Doctor.*—A poor devil was once carried into a French hospital, run through the body with a roasting-spit. The surgeon on duty approached, gazed at the patient with a meditative air, and, after a time, addressed him as follows; What is your name? Your age? Your profession? What disease have you had in the course of your life? Are you well fed and lodged? Is your sleeping apartment well ventilated? What relations have you? Are they subject to any disease? Of what did they die? Have you children? Is their health good? How were you injured? To each of these questions the poor wounded man replied painfully, gasping, after each answer: The spit! Take away the spit! . . Have patience, my friend; do you suffer much pain? What sort of pain do you suffer? Oh! Doctor, the spit, the spit! Was the blood you lost red or black? Do you breathe easily? The spit! Have you any cough? Do you raise anything? Let me see your tongue? Have you a bad taste in your mouth? Have you a good appetite? Are your bowels in order? Have you passed any worms recently? Can you lie on one side as well as the other? Is your water high coloured? Has this accident happened to you often before? Are your family subject to it? The spit, the spit! One moment; let me feel your pulse. And the doctor, with a magisterial air, examined all the functions, percussed, succussed, auscultated, and the patient expired, just as he was preparing to remove the instrument of impalement.

Naval Surgeons.—We notice that the following gentlemen from Virginia have lately passed their examination before the Naval Board, and have been admitted as Assistant Surgeons in the Navy. Drs. John Vansant, Ed. R. Denby, Francis L. Galt, and Wm. M. Page.

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* Mr. Editor: A couplet in the amusing and instructive poem, published in the *Varieties* of your last number, has reminded me of the accompanying anecdote. It is a broad but not unfair burlesque of a class of physicians who exist among us, as well as in France, whose fastidious attention to minutiæ, and disregard of obvious indications, tempts the spectator to cry out to them: The spit, the spit!

Yours, &c.

A. N. A.

New York Hospital.—The new and spacious addition to the group of buildings occupied in the heart of the city by this Institution, was opened with a ceremonial celebration on the 18th ultimo, in the presence of a respectable company of visitors. The excellent address by the Senior Attending Physician, Professor Joseph M. Smith, was mainly historical, and added much to the interest of the occasion. The cost of the new building is said to have been $150,000, which was chiefly obtained by voluntary contributions from our wealthy and benevolent citizens, to whom the Governors of this Hospital never appeal in vain.

New Works in Preparation.—Dr. Stephen Smith, one of the editors of the New York *Journal of Medicine*, is preparing for press a work on "Medical Jurisprudence, in its application to the practice of Medicine, Surgery, and Midwifery in the United States," and is desirous of having members of the profession communicate to him reports of trials for mal-practice, or any facts relating to cases where suits have been threatened, or instituted, or quashed, or in which mal-practice has been alleged in the practice of Medicine, Surgery, or Midwifery. Professor Draper is about to publish a Treatise on Physiology; it will be issued in August next. Professor Bedford has completed his work on Obstetrics and the Diseases of Women and Children, to be issued by the Messrs. Wood. Schroeder, 12 Bible House, is about to publish a second edition of Professor Mott's "Tour in the East."

NECROLOGY.

WILDMAN, WELLS, HARRIS, HARTRIDGE, ELLIS, SCHLEY, GORDON, BRANTLEY, SAUSSAY, CULLEN, are the names of the devoted physicians who died nobly, while doing their duty during the pestilence in Savannah.

E. DEMING, Professor of Pathological Anatomy in the University of Missouri, died on the 23d of February, at the age of 58. He filled the position of a public teacher with credit to himself and satisfaction to his associates.—*St. Louis Med. & Surg. Journal.*

DR. ASHTON ALEXANDER, of Baltimore, died on the 16th of March, at the age of 85.

ACHILLE PIERRE REQUIN, Professor of Internal Pathology to the Faculty of Paris, physician to Hotel-Dieu, member of the Academy of Medicine, chevalier of the Legion of Honor, etc., died recently at the age of 51. Requin was a man of undoubted ability. A pupil of Chomel, his tendencies were to the study of the practical and useful. He was four times defeated in *concours* before he attained the professoriat, but on each occasion he raised his reputation by the evidences of talent and learning he displayed. He was the author of numerous memoirs, and of an excellent *Treatise on Practical Medicine*, in three volumes.

J. C. A. CLARUS, for 39 years professor of clinical medicine at Leipsig, died a few months since at the age of 80. He wrote extensively on anatomy and pathology. He was the first to make known in Germany the works of Bichat.

G. L. DUVERNOY, Professor of Comparative Anatomy at the Jardin des Plantes, died on the 1st of March, aged 78 years.

POSTSCRIPT.

News from the American Medical Association.

We stop the press, to give our readers the following rapid sketch of the proceedings of the American Medical Association, during the *first* day of its session, in a letter received from our editorial *confrere*.

Philadelphia, May 1, Tuesday Afternoon.

The association met at Musical Fund Hall, at 11 o'clock this morning. The number of delegates is said to be upwards of 400. The following States were unrepresented at the opening of the session, viz. Mississippi, Louisiana, and Texas. The others had representatives in attendance. The society was called to order by *Dr. J. Hays* of this city, and the president C. A. Pope, M. D. *of St. Louis*, took the chair, and was flanked by vice presidents *Davis* of *Chicago*, *Green* of *Rhode Island*, and ex-president *Wellford* of *Virginia*. Professor Pope is comparatively a young man, of very prepossessing appearance, and in his address opening the proceedings, exhibited uncommon power of elocution, his address giving the highest satisfaction. The secretaries were both present, viz., *Dr. West* of *Philadelphia*, and *Dr. E. S. Lemoine* of *St. Louis*, formerly of Petersburg, Virginia. To the eye the association presents a spectacle of great interest; we have here the sleek denizen of the city, side by side with the embrowned backwoodsman. It was remarked by an observer, that a body of more intellectual looking men was seldom to be met with.

The business of course moves slowly on. One who has attended these associations before, can precisely imagine how we got off to work, for we have as actors in these proceedings, just the same persons always, and who do and say always the same things. Although they may not be the same, men with the same sort of faces, at every meeting, pop up, very earnestly announcing important discoveries which they have just made of some irregularity in the proceeding, and almost as suddenly find that they were mistaken, and pop down again prodi-

giously embarrassed. This class of individuals come so heavily charged, that they "go off" upon the slightest occasion, and although they never project forth any thing but a little harmless air, they nevertheless do an immense deal of mischief, by seriously retarding all business. We cannot have a meeting of the association without these scenes, and for one we are resigned to them. Next to these, are scenes which likewise transpire at every meeting, growing out of a defence of the constitution by the original signers. Any attempt to misinterpret the laws of the association, always brings *Dr. John Watson*, the distinguished surgeon of the New York hospital to his feet. With a flashing eye, and in a curt, sententious and able manner, this gentleman is always in place to see that all hands are off on this point. His usefulness in this respect is great, and we are sure that he has the thanks of the society for his labours.

After calling the roll, which consumed a considerable time, the usual resolution that the delegation from each state name one of their number as a member of a committee to nominate officers, was carried. The following is the list of this committee, which I fear is imperfect, it being taken down as the names were called.

Maine, Dr. Fuller; New Hampshire, Dr. Cummings; Vermont, ———; Massachusetts, Dr. Fisk; Rhode Island, Dr. Mauran; Connecticut, Dr. Jewell; New York, Dr. McCall; New Jersey, Dr. Contie; Pennsylvania, Dr. Biddle; Maryland, Dr. McGill; Virginia, Dr. Wellford; North Carolina, Dr. Manson; South Carolina, Dr. Gaillard; Georgia, Dr. Arnold; Alabama, Dr. Cabell; Tennessee, Dr. Lindsay; Kentucky, Dr. Battle; Ohio, Dr. Hill; Indiana, Dr. Pennington; Illinois, Dr. Blaney; Missouri, Dr. Perry; Arkansas, Dr. Parmly; Iowa, Dr. Palmere; Wisconsin, Dr. Dowson.

After this committee retired, *Dr. Stillé*, chairman, announced the report of the prize committee. Six papers were offered; the premium was awarded to but one. This was on the "*Statistics of Placenta Prævia*," and proved to have for its author Dr. JAMES P. TRASK *of White Plains, West Chester, New York.* It was characterized by the committee as a most able production. After the reception of a few reports of committees, the association adjourned, until tomorrow, 9½ o'clock, A. M., the nominating committee being still out.

It is rumoured that the delegates from this city are unable to agree upon the president. *Prof. Wood's* name is the most prominent, and we are sure that his selection would give the greatest satisfaction.

Among the many invitations which we have received, the most interesting is one from the mayor, for the association to visit *Independence Hall*, where in person he will receive the society in the room occupied by the first congress &c. at 12 noon, to-morrow.

The members of the society were with their cards presented with invitations to the following. Tuesday evening: Dr. Hodge, Dr. Norris, Dr. Bache. Wednesday evening: Dr. Wood, Dr. Stillé, Dr. Paul. Thursday evening; Dr. Hartshorne, Dr. Jackson, Dr. Pancoast, Mr. Lea.

Omnibuses are in attendance to carry members to the hospitals and all other places of interest. The grand supper is I hear abandoned, and I cannot withhold my approbation of this measure.

The election for Prof. of Surgery in the University of Pennsylvania occurs to night. The candidates are *Dr. Smith* of *this city*, and *Prof. Brainard* of *Chicago*. The latter gentleman, celebrated as an innovator, and characterized by uncommon energy and ability, it is thought will receive the place.

It is generally supposed that the committee will suggest Nashville, Tennessee, as the next place of meeting of the Association. P.

THE

VIRGINIA

MEDICAL AND SURGICAL JOURNAL.

JUNE 1855.

ART. I.—*Contributions to Practical Surgery.* By JOHN P. METTAUER, M. D., LL. D., of Virginia.

Vesico Vaginal Fistula.—It is now more than twenty-five years since I first operated for the cure of this afflictive infirmity, during which period many extremely interesting cases have been treated by me, and most of them successfully. Recently, several examples of the disease have come under my care, and, as they resulted fortunately, I have thought it might not be unacceptable to the profession at large to give them publicity, as well as to describe the modes of operating I now adopt. Indeed, I think every successful case should be published; as it is the increasing number of cures that will induce surgeons to regard it no longer as an opprobrium of our noble art, but as a curable disease, in a large majority of instances; and such is the opinion that my individual experience leads me to express in this paper.

Some years since I contributed, through the American Journal, a short paper on vesico vaginal fistula, with an account of some cases I had treated successfully, and I expressed the opinion in that communication, that every example of the disease could be cured. Since that paper was published, some extremely bad forms of the infirmity have come under my treatment, which, from their utter incurability, have

induced me to modify the opinion then entertained; yet, I believe a very large proportion of the cases are curable. When the entire bas-fond of the bladder is destroyed; or the urethra and cervix quite into the vesicle triangle, such cases are indeed utterly incurable; and several of these horrid examples have been presented to me since the paper referred to was published.

In one of these cases it seemed that the entire bladder had sloughed away, leaving only the orifices of the ureters, into which I could readily introduce a common probe, and carry it up several inches into the ureter itself. There was not the least appearance of the vesical cavity; and the ureters terminated on each side of the contracted vagina in a spongy growth, rather larger than the extremity of a medium sized finger, and about an inch in length. There was no ulceration of the parts, but considerable irritation constantly existed, induced, no doubt, by the action of the urine upon them. This woman menstruated regularly, and seemed to be healthy in all respects, save the irritation and excoriation of the vagina and vulva, which, occasionally, became very distressing and troublesome.

The other case differed from the one just described, in presenting a mere border of the bas-fond of the bladder, upon which the ureters opened by fungous growths of considerable size—the greater part of the floor of the bladder posteriorly and anteriorly nearly to the meatus urinarius having sloughed away; yet the vesicle cavity above remained partially as a kind of fossa. This subject, too, enjoyed pretty good general health, menstruated regularly, but suffered much from occasional vagino-vulval irritation and excoriation.

Such formidable diseases as these, are to be regarded as necessarily irremediable. Fortunately, however, they are not of frequent occurrence, as I have only met with two such examples out of thirty-two cases, that have come under my management, in all.

The following case, which I shall relate in full in order to explain my method of operating, occurred with a white married woman, aged about 35 years, and followed her first and only parturition, which was protracted, as I was informed, and badly managed. The fœtus was large, and the head remained nearly two days in the inferior strait, during which time the bladder was so closely compressed as to render urination impracticable, and the introduction of the catheter exceedingly difficult. It was not known, as I learned from the lady herself, for several days after delivery—four or five she thinks—that there was

anything wrong about the bladder, or in the passage of urine, except that there was a constant dribbling of it, and totally without the control of the will.

There was considerable inflammation of the parts at this time, and for many days after, which prevented the necessary examination into the case for nearly three weeks after delivery. Finally, it was ascertained by the attending physician, that an opening existed in the vesico-vaginal wall, near the urethral portion of the vesical triangle, through which every drop of urine escaped from the bladder into the vagina. The general health of the lady had materially suffered from constant irritation of the vagino-vulval surface; and I believe, if the fœtus had not been still born, that she, in all probability, would have succumbed under her sufferings. From having been a remarkably healthy, robust woman, she now was emaciated and greatly debilitated; and such is the usual effect of this painful affection on the constitutional health.

Some five or six months after this lady's accouchement, I was called on for the purpose of deciding as to her real condition, and my examination confirmed the report of her family physician. I found an elliptical opening beyond the sphincter muscle more than an inch in length in its longest diameter, which was transversely situated, while its shortest, or antero-posterior, did not exceed half an inch. Already a tuberculated fungous mass of considerable size presented through the fistulous opening—a common appearance in the disease—which caused intense pain of a dragging, bearing down description, when the bladder contracted, as it often will do, when, from any cause, urine accumulates within its cavity even in small quantity. The borders of the opening were smooth, rounded, and completely cicatrized, presenting a labiated appearance, and were entirely free from all inflammatory tenderness, as was evinced by pretty rude pressure with the probe or finger causing very little if any pain.

The case being in all respects favourable for an operation, it was determined to execute it at once, and the following was the mode adopted. I had the lady placed on her back, very much in the position as for lithotomy, on a high bed, with folded blankets and sheets under her to protect the bed, the parts being exposed to the strong light of a window immediately opposite to, and on a level with the perineum. Care was taken that the nates rested fairly on the edge of the bedstead, so as to render the parts about to be operated on easy of access. A two bladed speculum was employed for the purpose of dilating the os ex-

ternum and vagina, which, after being screwed open to the requisite extent, was held in its proper position by grasping the handle. This instrument displayed the fistulous opening fully, and caused little or no pain: it was firmly held *in situ* by the lady, with perfect convenience.

The free borders of the fistula were next denuded of their mucous membrane, by the use of delicate hooks to take hold of it, and scissors curved on their flat surfaces, or delicate knives curved in like manner, or of the ordinary form, to excise it beneath the hook. In this manner I removed a narrow but continuous belt of mucous membrane from the entire border. In denuding in this operation, the belt should, if possible, be excised in an undivided manner, for reasons too obvious to be mentioned. I next removed the mucous lining for half an inch beyond the denuded border, commencing at that border, and taking it off, likewise, in an undivided continuous belt, using the cutting instruments already named. During this stage of the operation, for the purpose of arresting the traumatic bleeding; always exceedingly troublesome without being profuse, by obscuring the parts, and thus retarding and protracting the operation; cold water was freely applied by injecting it over the denudations with a syringe.

For the purpose of approximating the denuded borders of the aperture and confining them in contact, metallic threads of pure lead of moderate size were employed, and they were inserted by the aid of needles considerably curved.

The metallic thread was employed of the length of five or six inches, doubled at each extremity upon itself and flattened a little so as to form a hook. This hook was then hung in the loop of a silken or thread ligature previously inserted into the eye of the needle.

Thus arranged, the needle, held in the grasp of Physic's artery forceps, with its point deeply inserted into the fistulous opening, and directed upwards, was made to transfix the upper border from the vesical cavity to the vaginal surface fully an inch from the denuded margin, and half an inch on the right side of the urethra. The needle, with its appendages, the thread and leaden wire, was now carefully drawn through with a pair of strong forceps, until the metallic thread was fully one third of its length out beyond the border.

I next armed the other extremity of the leaden thread, by connecting its hook with the loop of the ligature still remaining in the eye of the needle, to be inserted below. The needle, for the purpose, was held and directed by straight forceps, grooved at the extremities of the

blades, so as to receive and confine it securely, and somewhat longer than Physic's; while its point was deeply inserted into the inferior border through the fistula, from the cavity of the bladder, and brought out fully an inch from that border on the vaginal surface. As soon as the point of the needle was perceptible, it was taken hold of with the traction forceps, already referred to, and carefully drawn through with the metallic thread attached to it. This insertion was made directly opposite the one above, to prevent puckering of the borders when the threads were tightened.

In like manner, a suture was applied to the right portion of the fistulous opening, and the blood was now carefully removed by forcibly injecting cold water over the parts, or by picking away adhering coagula with the forceps, where they could not be removed by the water.

I next proceeded to approximate the denuded borders, by making traction on the metallic threads, and then carefully confining them in close and exact contact by twisting their free ends together, until the loops were sufficiently abridged, to enable them both to support, and moderately to compress the structures embraced by them; and for the purpose of twisting the wires, I employed a light pair of self-closing forceps, without ring-handles, having found that instrument far more handy than the ordinary dressing forceps, or forceps with ring-handles. After securing the first suture so as to bring the denuded borders well together, I tightened the second, and was gratified in finding that the fistulous opening was perfectly closed, and that not a drop of urine escaped between the borders. I was careful in twisting the wires not to employ undue force, but sufficient to bring the opposing surfaces into complete and firm contact, without injuriously compressing the unlooped structures; and I invariably twisted from left to right, to prevent confusion.

After many trials in determining the extent to which the tension should be carried, I finally adopted as a safe rule, the fixed and erected state of the twisted extremities of the wires, and their bristle-like spring when touched with the probe; and the tightening of the loops should be executed with extreme caution and gradually, testing it as we proceed, from time to time, by touching the wires with a probe or the extremity of the forceps.

After having tightened the wires sufficiently, I found that fully one half of the surfaces denuded beyond the margin had been brought completely in contact, thus affording a more extensive surface for adhe-

sion. The twisted extremities were now cut off transversely, so as to project a few lines beyond the verge of the vulva. Again the seat of the operation was carefully washed with cold water applied with the syringe, and every part critically examined. A short tube of silver, of the form of a female catheter, and very light, not more than five inches in length, with a small ring at its open extremity, was now introduced into the bladder, to prevent the slightest accumulation of urine in that organ. In arranging the position of the tube, I was careful to guard, as far as possible, against the instrument's resting chiefly on the floor of the urethra, to prevent the incontinence liable to follow in some cases when it remains long in the bladder.

The lady was now removed, and placed on a bed previously arranged, as in cases of parturition, on her left side, because it was at the time most convenient. I directed that the position on the side should be rigidly maintained, as it would prevent, in a very great measure, the draining of urine over the seat of the operation, which, if not guarded against, might greatly disturb the adhesive process, and thus defeat the operation. A commanding narcotic was now given, and every thing arranged to promote slumber as far as practicable. A diet of tea drained from bread, or rice gruel, was directed, taken in small quantity and after long intervals. The application of cold water to the whole vagina with the syringe was directed to be kept up day and night, care being taken not to wound or disturb the seat of the operation with the instrument. The opiate soon quieted the nervous system, and procured very considerable ease.

Fearing that the bowels might act, as will sometimes be the case for several hours after the operation, the narcotic was directed to be repeated in six or seven hours after the dose already given, and to be continued at like intervals, as long as any marked pain was felt in the bladder, or the seat of the operation. It was only necessary to give a second dose of the narcotic, as every thing went on most favourably. The cold water was faithfully used to the vagina, and afforded great comfort.

On the third day I tightened the sutures moderately, and having left the free ends long enough to project above the verge of the vulva, little difficulty was experienced in reaching them with the forceps for the purpose. The applications of cold water to the vagina having soothed the parts so pleasantly, were directed to be continued.

As yet there had been no action from the bowels, nor was there any

disposition manifested to such action. The urine had flowed freely through the tube, without the slightest draining over the seat of the operation. Finding some incrustations about the threads, and mouth of the tube, I removed the instrument on the fourth day, and replaced it with a new clean one.

On the eighth day the sutures were removed by snipping with scissors, one thread just below the twisted portion of each noose, and drawing it away with the forceps, and I found that perfect union had taken place between the borders, leaving not a vestige of the fistulous opening. Some slight bleeding from the orifices left by the threads followed, but was only momentary.

The seat of the operation presented very slight tumefaction, and the undue redness was only a shade above what was natural to the mucous lining of the vagina. I continued the tube in the bladder two weeks from the time of removing the sutures; and directed the lady to keep her bed the same length of time, to allow the adhesions to become perfectly consolidated, before imposing any considerable amount of stress on the vesico-vaginal floor, from the accumulation of urine in the bladder during an erect posture of the body. The bowels never acted until the twelfth day after the operation, and when they did act, the evacuation was natural and easy. I then permitted a more sustaining and generous diet; and from day to day thereafter, the quantity was augmented gradually, until full meals were taken.

Three weeks after the removal of the sutures, this lady left my neighborhood perfectly restored to health, except very slight incontinence of urine (by no means unusual after the operation, but which generally ameliorates) and some general debility.

The mode of operating which I have just described may be regarded as the one I now invariably adopt in similar cases. It is true I have, in certain examples, pursued other methods, but they have in most cases been unsuccessful. In several instances I have made trial of the quilled suture as improved by Dr. Sims, now of New York, but it has not succeeded in my hands. The cases in which it was employed were, as I supposed, favourable for its successful application, but I did not succeed in them. In each case, three in number, the operation failed from ulceration of the denuded borders, both at the margins and where the metallic clamp rested on them, and by the premature cutting out of the silver wires. In one case, the clamp induced sufficient ulceration to form a new opening into the bladder so early as the 5th

day after the operation. Possibly I may have used undue force in the approximation of the denuded borders in these cases; but it seemed to me that I only carried it to the extent of placing them in complete and firm contact.

This suture, however useful it may have been in the hands of Dr. Sims. is liable to important objections. If applied with too much force, it will almost certainly cause ulceration or actual sloughing of the denuded borders; and it will be very difficult, in most cases in which it is used, to determine the degree of force which should be used in applying it. Even when moderate compressing force is employed, the circulation of the parts must be essentially impeded the whole length of the clamps, which cannot fail to endanger the success of the operation by producing ulceration or sloughing of the border.

There is another weighty objection to this suture, and I think it equally as important as the one just named. It is the almost utter impossibility of increasing or diminishing the approximating force after the suturization is completed, and the wire threads cut off, should it be necessary to do so; and, according to my experience with the leaden suture, used as I have described in the case already detailed, it will always be necessary to increase that force on the second or third day after the the operation; which can be most readily done by simply twisting the wire a few turns, or, until it is firmly and steadily exerted, as already described.

The liability of the silver wire to cut out prematurely constitutes, likewise, a solid objection to the clamp suture, especially if the borders are thin, and the mucous membrane delicate.

The interrupted suture, formed of leaden wire, is not liable to these objections in any material degree. If it causes ulceration or sloughing of the denuded borders, only the parts immediately embraced by the metallic loops will suffer, while the structures between will remain comparatively uncompressed, and their circulation allowed to go on nearly normally, thus favouring adhesion of the denuded surfaces held together by them. This suture, too, can be applied with measured degrees of force, as already explained, so as to adapt that force with precision and safety. And it enables the surgeon to increase its approximating agency at any time after the operation, should it be found necessary, without subjecting the parts to disturbance, or the woman to pain.

The strongest objection to this suture is its liability to "cut out,"

before firm adhesion takes place between the denuded borders. But if the thread is deeply inserted, never less than an inch, and more deeply, if the structures are soft and delicate, and always beyond the denuded borders, this accident will seldom if ever defeat the operation. The more effectually to secure the permanent agency of this suture in keeping the margins in close and steady contact, it should be made to include considerable thickness of the structures anterior to the bladder, as well as width of border; and this can be effected by directing the point of the needle more profoundly into the textures as it is introduced. The thread, as already intimated, should invariably be carried through the border considerably beyond the denudation. If this precept is not strictly obeyed, the suture will certainly "cut out" prematurely.

It is the depth of this suture that secures its reparative efficacy in the cure of vesico-vaginal fistula. That is the point on which success turns; and if the denudations are effectually executed, a failure will seldom follow. This suture can be safely passed through the vesical wall, and I decidedly prefer it in all cases, because it secures more effective suterization; and it is entirely free from all liability to induce inflammation of the bladder, as my experience fully testifies.

The possibility of small fistulous openings following suturizing through the walls of the bladder, is the only danger of importance that is to be feared; and if the threads are not permitted to remain longer than 8 or 9 days, this accident can hardly take place. I have often suffered them to remain 10 and 12 days without such an occurrence. In a few hours the ligature openings close. I have rarely known them discharge urine after a day.

The long continued irritation of the vesicle walls, induced and kept up by the fistula, seems to render the whole bladder less susceptible of acute inflammation. It is very certain that rude violence done to the bladder is seldom or never followed by acute cystitis when vesico-vaginal fistula exists. I have never yet witnessed a case of it, and opportunities have often been afforded me of seeing the bladder violently irritated during operations for vesical fistula. By transfixing the bladder, in the employment of this suture, besides uniting great security and firmness in its approximating agency, it also enables the operator effectually to oppose a much broader belt of the denuded margins of the fistula, by reason of the unbridled condition of the borders, and their tendency to introvert, in some degree, when brought together by

tightening the wires. And this is an important consideration, when the margins are thin, as will often be the case, in favouring adhesion.

The clamp suture necessarily precludes any such widening of the margins to be united, by reason of the threads of silver wire basted through them, which compel the margins to approximate and come into contact only at their borders, when those threads are tightened, after the clamps are adjusted. It is evident, from a moment's reflection, that only very limited portions of the denuded margins, except the border or edge, can be brought into contact by the application of this suture. If the silver threads were made to penetrate the vesical cavity, or even to re-enter the vaginal passage a few lines before reaching the border, the difficulty just considered might be obviated, and the utility of the suture greatly enhanced. Indeed either of these modifications would be, in my humble opinion, an improvement of the clamp suture, especially the first one named.

I have been thus particular in considering the comparative merits of these two methods of suturizing, in the treatment of vesico-vaginal fistula, because my individual experience with them enables me, in a degree, to judge of their relative value; and because, too, I wished the objections to both, as far as I was able to appreciate them, fairly placed before the profession.

It has been asserted by some of the journalists of the north, in support of the safety and infallibility of the clamp suture, that laceration of the recto-vaginal wall was incurable until that method of re-uniting the parts was adopted. This is certainly an incorrect statement, because so early as 1832, I treated a case of this laceration with complete success by the use of the leaden wire interrupted suture, which case was reported in the 25th number of the American Journal; and, subsequently, I have reported other cases of that disgusting affection, treated successfully with the same kind of suture; in all having treated and cured *twenty-seven* cases with the leaden interrupted suture alone, and without the least difficulty.

In every case of vesico-vaginal fistula, the sutures should be made to act in the direction of the short diameter of the opening, as will be the case where it is elliptical. If, however, it is circular, as I have seen in twenty instances, the sutures should be introduced transversely. The transverse direction is most favourable, both for the approximation of the borders, and adhesion, because the structures yield and expand readily in that direction; yet if the disparity of diameter is inconsid-

orable, it will be best to suturize transversely. The needles should invariably be as small and delicately formed as possible, and entirely free from cutting edges and asperities.

The considerations, which have been presented, relate almost exclusively to the uncomplicated and simple examples of vesico-vaginal fistula, and the case detailed may be assumed as a fair type of the disease, and my mode of treating it. In the varieties distinguished by complications, a treatment will be demanded, adapted to such complications; but, generally, the mode of suturizing, I have advocated in this paper, will, with these, be also indispensable.

When the opening is very large and the borders cannot be brought fully together without the employment of great force, it would not be safe to rely exclusively on the suture, as it would almost certainly "cut out" before adhesion could possibly take place. Nevertheless the suture is the chief agent in approximating, and maintaining the firm contact of the denuded borders.

To prevent premature loosening and "cutting out" of the sutures, it will be proper in these examples to form sloping incisions of the lips, beyond the points transfixed by the sutures, deeply into the textures, and longer than the diameter of the fistula, on both sides, after the marginal denudations have been formed. These incisions will generally allow the borders to be easily approximated, without interfering with the adhesive process in the slightest degree, and they cause very inconsiderable pain: they must not extend to the vesicle cavity. Should the margins prove unyielding, after forming the incisions, it will be proper to deepen and extend them in an undermining manner in the direction of the fistula, taking care not to cut into the bladder. If properly executed, this expedient will seldom fail to render the lips of the fistulous opening easy of approximation; and the incisions soon unite, in their new relations, so as to aid the sutures, in keeping the borders from separating, or themselves from "cutting out" prematurely.

This mode of operating is applicable to all examples of the infirmity, attended with large openings, in which the borders cannot be drawn together without employing considerable force, as well as in some cases defying their approximation without such incisions; and if properly executed will seldom fail of success, and the incisions soon heal up.

When the borders are thin and readily approximated, instead of denuding them, a new surface of considerable width may be formed

around the edge of the opening, by carefully splitting it with a delicate and keen knife two or three lines in depth. The borders being now carefully drawn together, and the incisions opened with hooks, or by passing a probe around them as they come in contact, quite an extensive surface for adhesion is secured, and the union which results will be proportionally firm. This mode of operating will be more applicable to cases attended with thick borders, because the splitting of thin edges is by no means easy of execution, while those of some thickness can be incised with great convenience.

To perform this section, the lip must be held by long, delicate self-closing tenaculum forceps, and slightly everted, so as to bring the edge of it fairly into view. The incisions can now be formed in succession, until the whole border is split, taking care that they shall be directed along the middle of the border.

This operation, for denuding the border, is much more easily performed than that by the removal of the mucous membrane; and when properly executed the new surfaces readily approximate and unite. It is, too, the best mode of rendering the edges raw for the employment of the clamp, or any form of the quilled suture, especially if the silver threads are brought out upon the borders through the middle of the incisions, so as to secure the perfect contact and fixation of the new surfaces. Upon this plan the thinnest borders can be made to unite in the firmest manner. Should the first operation with it, however, fail, the borders will become considerably thickened by the marginal incisions, and the parts placed in a better condition for repeating the operation some weeks afterwards, or, as soon as all inflammatory tenderness of them subsides.

After numerous operations for vesico-vaginal fistula, performed by myself, and varied in almost every possible manner since 1830, I have at last adopted the methods, that have been described in this paper, as the best for a very large majority of the cases of this infirmity, if not for all that are to be regarded as curable; and I believe it can be so improved, especially in the formation of instruments, as to render it far less difficult of execution than is now the case. I am confident that I operate now with less difficulty than I did three years since; and there cannot be a doubt but this is due chiefly to progressive improvements in my instruments, as well as to my increasing familiarity, both with the applicability of the instruments, and the infirmity itself.

There are certain complications of this affection that, at first sight,

present difficulties well calculated to embarrass inexperienced operators; and in some instances give no little trouble to those most conversant with the disease.

The first to be named is a *fungus growth* from the mucous membrane of the bladder; just within the verge of the fistulous opening. This formation presents a red granular surface, closely resembling healthy granulations in appearance; is tuberculated in form; varying much in size; is pedunculated; often partially filling the fistulous opening, but chiefly presenting or depending into the vagina, and when touched with the probe yields blood freely. When of moderate size, it almost invariably recedes into the bladder on placing the body recumbent. Even when quite large, it often, nay, generally, re-enters the vesicle cavity upon lying down.

This formation causes those distressing bearing down pains, and strainings, so common in vesico-vaginal fistula; and they, occasionally, continue to be repeated many days after the fistula is closed, now and then causing the reopening of the fistula, by cutting, or tearing out the sutures after partial adhesion had taken place in some instances. In some cases they involve the orifices of the ureters, seeming to be an elongation, and hypertrophied enlargement of these orifices, as the urine can be seen discharging from their surface by drops or jets.

As long as these bodies remain within the vesicle cavity they cause little if any pain; but as soon as they protrude from it, the bearing down and straining commence, and continue until they re-enter the bladder, or the person is placed recumbent.

In denuding and suturizing the borders, these protrusions are liable to be wounded, and should be carefully avoided, as they bleed quite freely, which accident would seriously embarrass and prolong the operation, but without endangering the bladder from inflammation in the slightest degree. My custom is to force them back into the bladder with the index finger before the denudations are commenced, and to confine them within the bladder, by temporarily closing the fistula with a kind of probang, of proper size, resting on the inner surface of that opening.

After the sutures are applied, and the fistula closed, there will not be any reason to entertain fears from these tuberculous bodies, unless they cause strainings, as will sometimes be the case. If straining follows, narcotics in liberal doses will be demanded. In eight or ten days after the operation, and frequently as soon as it is completed, the

straining and bearing down uneasiness cease, and it is exceedingly probable that the spongy bodies are soon dispersed by the action of the absorbents.

Another complication occasionally to be met with, is the *inclusion of the cervix and os uteri by the opening of the bladder; and firm adhesion between them*, thereby causing the uterine discharges to pass into the vesicle cavity, where mingling with the urine, they, finally, are discharged through the fistula.

In these examples the openings in the bladder are large, or the uterus could not be included by them, to the extent generally met with; and although they are firmly united to the uterus, so as to conceal that organ completely from view, or the touch, they rarely, if ever, close without leaving an opening to constitute the fistula.

I have only met with a solitary instance of this complication in the thirty-two cases that have come under my care, and I am induced to believe it is not of frequent occurrence. Dr. Sims, also, mentions a case treated by him, but in what ratio with his cases is not stated, or I have not seen the statement if it has been published.

I treated my case as a common example of vesico-vaginal fistula, without making an effort to disengage the uterus from the bladder; and I had the satisfaction to find that the woman experienced little inconvenience from the new relations of these organs in urinating, or during the menstrual flow. Dr. Sims, I find, treated his case in like manner. But for the escape of the menstrual discharge from the urethra, with her urine, my patient would never have supposed there was any change in her condition as respects urination and menstruation; and it was a long time before she discovered that she menstruated through the meatus urinarius.

It is questionable if an attempt to release the uterus from the embrace of the bladder would ever be justifiable in these complications of vesico-vaginal fistula. And, it is probable, this complication supplies the only means of cure, as the openings of the bladder, in these cases, are too large to be closed in any other manner.

Calculous formations within the bladder, and around the borders of the fistula, occasionally complicate this affection.

When a deposition of calculous matter takes place in the vesicle cavity, it causes the usual suffering from stone of the bladder; and if a fungus body exists at the same time, its growth will be rapidly augmented, by reason of the increased bearing down and straining, caused

by the calculus within the bladder. Incrustations, from the deposition of calculous matter around the borders of the fistula, are, however, the most frequent form of this complication; and in some instances these incrustrations become exceedingly thick and bulky if the case has not been carefully attended to from day to day; and they invariably cause much suffering from the local irritation and excoriation induced by them.

If a calculus exist in the bladder, sounding will readily detect it, and it should be promptly removed by extraction through the fistula.

The incrustations can be most readily and painlessly gotten rid of by picking them away with the forceps, the vagina being previously dilated with suitable instruments, and exposed to a proper light. After every particle of the incrustation is removed, the parts should be freely washed by injecting over them cold water, as already described. I have only met with a single case complicated with stone of the bladder, which was also attended with extensive incrustations around the fistulous opening; but nearly every one was complicated, more or less, with incrustations around the opening—and sometimes upon the fungus growth also.

Recto-Vaginal Fistula has, now and then, been observed in connection with the infirmity, and of this complication, too, I have met with a solitary instance.

In this case the opening into the rectum existed about an inch and a half from the verge, was elliptical in form, the long diameter corresponding with the long diameter of the rectum, and readily admitted the extremity of the index finger. The discharge of fœces through the opening into the vagina, in this case, greatly aggravated the irritation caused by the urine; and the irritation of the fistula kept up almost constant disorder of the bowels.

This is indeed a most afflictive complication, and one, too, well calculated to embarrass the surgeon in determining as to its treatment. In the only case that I have ever witnessed, I operated for both affections at the same time, and was so fortunate as to succeed by one operation.

The borders of the recto-vaginal fistula were first denuded and suturized. I next operated for the vesico-vaginal fistula as already described, and in nine days the leaden threads were cut away, and both fistulæ found to be perfectly closed by firm adhesions; and this patient con-

tinues well, now six years since the operations were performed—having given birth to two children during that period.

I think in all similar cases that both fistulæ should be operated for at the same sitting, as very little more time will be acquired, or pain experienced. If, however, it should be necessary from any cause to depart from this rule, and to operate for them at different times, the vesico-vaginal fistula must invariably be the first to be cured, as the incessant draining of urine over the rectal fistula, even if closed in the best possible manner, could hardly fail in defeating the operation.

Contraction of the vagina is by no means an unusual complication, because the same agency inducing the fistula likewise can produce sloughing and contraction of that passage. In some instances the contraction nearly or quite closes the vagina.

These contractions, in all of the cases in which I have met with them (three in number), serve to embarrass the operation by rendering the fistulæ more or less inaccessible. They should, invariably, be corrected before attempting the operation for the fistula; and for the purpose it will generally be sufficient, either to dilate the vagina with graduated tents of sponge covered with oil silk, commencing with the smallest; or, by cautiously dividing the bands causing the contractions, and then dilating with the tents. I have employed both of these methods with entire success.

It is important not to attempt the operation for closing the fistula until the tents of the vagina can be dispensed with, as their presence in that passage, after such an operation, would seriously endanger its success, more especially as long as the sutures remain, and for the first two weeks afterwards.

In some cases, along with the fistulous opening of the vesico-vaginal wall, there will be *laceration*, or *destruction of the urethra*, partially, or its entire length.

I have met with two examples of this unfortunate complication, and how they were caused I never was able to ascertain fully, but I ascribed them to the long continued pressure of the fœtal head upon the parts, during its slow progress through the inferior strait.

In one of these cases the urethra was laid open its whole length, and it was difficult to discover a trace of the original canal. But for the slight projections that remained in the seat of the meatus, I should never have supposed a urethra had existed. The other case had suf-

fered only partial destruction, as the meatus, and about half of the urethra, remained entire.

These complications are always difficult to remedy, besides being sources of irritation, and, comparatively, barriers to sexual intercourse, which they render painful as long as they exist. These cases are amenable to treatment, and, judging from my experience with them, as far as two cases will enable me to decide, I think they may always be remedied.

After denuding the imaginary borders, in the case of entire destruction, I employed the clamp suture of Dr. Sims, which enabled me to restore, or, perhaps I should say, to form the urethra, and to maintain the parts well together. I only employed force enough to bring and keep the borders well in contact.

After three days I had the mortification to find that the clamps had become loosened by reason of the wire threads having cut out, and the borders had separated. I removed the whole apparatus, and after two months repeated the operating with the interrupted leaden suture. This was applied deeply, at intervals of four or five lines. In two days the sutures were tightened, at which time not the slightest separation of the borders had taken place. A very light silver tube was kept in the passage from the time of operating until a week after the sutures were cut away.

On the eighth day I removed the threads, as already described, and found perfect union had taken place, except a very small portion near the meatus. After six months, I closed this with two stitches. The subject of this case has entire command of the retaining and expelling powers of the bladder. The case of partial destruction was relieved by a single operation with the interrupted leaden suture, restoring also the retaining and expelling powers of the bladder.

Incontinence of urine sometimes follows the operation for vesico-vaginal fistula, either as the result of injury done to the sphincter muscle in the formation of the fistulous opening; or, from continuing the tube in the bladder too long; or, using one too heavy, and suffering it to rest entirely on the lower or under segment of the urethra. This is a most troublesome and disagreeable infirmity. It sometimes continues only for a few days or weeks.

When time does not correct this evil, art must be called in. In some instances injecting the bladder with a solution of nitrate of sil-

ver, of the strength of 4 grains to the ounce of water, and in the quantity of 4 ounces, to be retained 2, 3, or 4 minutes, will afford relief, and repeating it once in 2 or 3 days. Now and then, a strong solution of alum, or a pretty concentrated infusion of green tea, used in like quantities, and after like intervals, will restore the retaining power of the bladder.

If these remedies fail, it will be best, either to pass a suture deeply around the cervix, and so tighten the noose to compress it decidedly, and to continue it for four or five days; or, to remove longitudinally an elliptical piece of the cervix, and then to close the opening with sutures as already described, keeping a light tube in the urethra as directed for fistula of the bladder. This last expedient will not fail to remove the incontinence; it is not attended with much pain in its execution, and will seldom be followed by acute inflammation of the bladder. I know from a trial of it, that it will relieve the incontinence, and, that the operation can be safely performed.

I have invariably adopted the position on the back, in my operations for vesico-vaginal fistula, believing it the most easy for the woman, and quite convenient for the surgeon. And for dilating the vagina, the two-bladed speculum, with the blades fully an inch and a half wide, and curved spatulæ of the same width I have generally employed, and found them to answer my purposes very well. I have used other contrivances also, but the speculum and spatulæ I have found much the most convenient in all respects. I generally employ a high narrow table, so formed that the lower limbs are supported above the operator's head, so as to be entirely out of the way, yet the woman suffers no pain or inconvenience from having them so disposed. The trunk I invariably secure against motion, by fixing it to the table, with a cross-bar passing through the uprights for the support and fixation of the legs, across the hypogastrium with the nates projecting somewhat beyond the border of the table. In every case I have the parts exposed to the light of a window on a level with them. If the window, however, is high, it should be curtained about three feet above the woman's body.

In some of my cases I have operated repeatedly without success, but the failures were due to undue softness of the parts, from bad general health, connected with a strumous diathesis, and before I adopted my present mode of deep suturization. It is not proper to operate for the infirmity while females are labouring under constitutional scrofula.

ART. II.—*Hospital Practice.** By GEORGE L. UPSHUR, A. M., M. D., Surgeon to U. S. Marine Hospital, Norfolk, &c. &c.

CASE XLIII.—*Ascites—Operation of Paracentesis—Recovery.*—Franklin Alley, æt. 27, single, blue eyes, dark hair, lymphatic temperament, previously healthy, was admitted August 31st, 1854. On 28th of April, when four days out from Callao, he was seized with tertian intermittent, from which he did not recover for six or seven weeks. This attack left him much enfeebled, and about two months ago, fluid commenced to collect in the cavity of the peritoneum. When admitted, he was excessively emaciated; breathing hurried and oppressed; abdomen enormously distended, so that it was impossible to examine the condition of the viscera; skin very hot, and dry; pulse 132, and incompressible; bowels loose, the dejections being liquid and yellow; countenance anxious; tongue flabby, clean and dry; thirst inordinate; urine scanty, and high colored; has had several paroxysms of ague within past two weeks; lies upon his back, and complains of no pain except across the epigastrium, when he attempts to sit up, from distension.

The patient suffered so much from this distension, and begged so earnestly to be relieved at once, that I immediately "tapped" him, and drew off ten quarts of transparent, reddish serum. The relief was inexpressible—the pulse, in an hour afterwards, had fallen to 120, and, for the first time in three weeks, he was free from pain. Ordered one of the following pills 3 times a day: ℞. *Hyd. submur., gr. xii.; Pulv. digitalis, gr. iij.; Pulv. scillae, gr. xx. M. Pil.* 12. This treatment was began on 1st of September.

Sept. 2.—Rested well; pulse 100, soft; bowels moved four times; appetite good; no abdominal soreness nor tympanitis; fluid is gathering again; thirst lessened; skin still dry, and harsh; spleen and liver are both larger than natural. Continue pills. ℞. *Elaterii, gr. iv.; Saponis, q. s. M. Pil.* 8. One every morning.

Sept. 3.—Does not feel so well; skin hot and dry; pulse irritable, 112; abdomen tympanitic, but painless on pressure; four small liquid stools since yesterday; thirst urgent, and urine very scanty. Continue treatment.

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* Continued from p. 283.

Sept. 4.—Better; seven large liquid stools, and a free secretion of urine; pulse 84, soft; skin moist, and more natural; tympanitis has disappeared; appetite good; thirst continues unabated. Continue treatment.

Sept. 7.—Continues to improve, and looks like quite a different man; tongue clean; pulse natural; skin moist; strength returning; complexion clear; urinary secretion very abundant; bowels freely moved every day. R. *Ferri sulph. quinia. sulph. aa, gr. xx.*; *Pulv. digitalis, gr. v.*; *Hyd. submur., gr. xv. M. Pil.* 20. One three times a day. Apply emp. canth. 6 x 6 to abdomen. Continue elaterium.

This treatment was persisted in until the 12th September, when he was found to be slightly ptyalised, and the calomel was omitted. From this time he convalesced rapidly, and was soon walking about.

On the 27th September I made this note: Alley has evidently been making blood too fast; bowels disposed to act less often; complains of headache; there is considerable œdema about the face, and some fluid in the cavity of the peritoneum; pulse 112, very hard and full. I bled him to 22 ounces from the arm, ordered half a grain of elaterium, and resumed the exhibition of calomel, squill, and digitalis, as in the first instance. We had no further difficulty in this case, and he was discharged on the 12th of October, seemingly in perfect health.

Case XLIV.—*Gangrene of Perineum— Opening into the Bladder —Recovery without Fistula.* (From the notes of R. S. Bernard, Jr., resident pupil.) James Strand, æt. 22, single, light hair and eyes, and lymphatic temperament, was admitted on 18th of October. He has just recovered from an attack of gonorrhœa, and three days ago commenced to experience some difficulty in voiding his urine. There is some distension above the pubis and in the perineum, with tenderness on pressure. He has passed no urine for twenty-four hours, and every attempt to do so gives him great pain. The catheter was introduced with very little difficulty, and a pint of urine drawn off—some blood followed the withdrawal of the instrument. Ordered 50 drops of tr. opii. at bed time.

October 19th.—Symptoms as yesterday: has passed no urine, and complains very much of weight in the perineum. At 10 o'clock, P. M., introduced the catheter and drew off 30 ounces of urine. There is not the slightest difficulty in passing the instrument into the bladder—

there is not even a spasmodic stricture, and the introduction is not painful. ℞. *Strychniæ, gr. j.; Ext. gent.,* ℈ij. *M. Pil.* 16. One 3 times a day.

October 24th.—Have found it necessary to introduce the catheter twice every day, since the last note. His system is beginning to sympathise with the local affection. Pulse 130, compressible; breathing hurried; tumefaction of the perineum has increased; no appetite; bowels confined; is very thirsty; restless and watchful. Ordered a dozen leeches to the perineum, and ʒiss of laudanum to be given as an enema.

October 25th.—Rested tolerably well; less pain; leeches took about twelve ounces of blood: pulse 134; skin moist; there is increased distension above the pubis, and the perineum is very tender and hard to the touch. On introducing the catheter, only about 4 ounces of urine, mixed with bloody mucous, came away. Repeat the opiate enema, and give a hot hip bath at bed time.

October 26th.—Little or no alteration; complains of weight, and a dull, heavy, throbbing pain in the perineum, which is exquisitely sensitive to the touch; bowels constipated; anorexia and thirst; the bladder, full of urine, can be easily felt at the hypogastrium. Drew off 30 ounces by the catheter. Continue the baths, and apply emp. belladon. to the perineum.

October 28th.—Has passed about 24 ounces of urine since yesterday; perineum and hypogastrium still distended, but less so than usual; pulse 110, irritable; no appetite; thirsty. Drew off 2 pints of urine by the catheter. Continue treatment.

October 30th.—Irritative fever continues; pulse 120; patient has emaciated considerably; the perineum and scrotum are very much distended, and the former is very spongy to the touch; he passes about a pint of urine, *sua sponti*, in twenty four hours, while the catheter takes two pints every morning; urine is of the usual color and unmixed with mucus. Within the past four days a decided spasmodic stricture has been felt at the membranous portion of the urethra, upon withdrawing the instrument. Thirst urgent; bowels confined; complete anorexia. ℞. *Pil. c. c.* 3 *at once.* ℞. *Fol. uva ursi,* ℥j; *Soda bi carb.,* ʒiss; *Aq. Bulient,* Oj.; *Fiat infus. S.* A wineglassful 3 times a day. Continue the baths night and morning, and give 5 grs. Ext. Hyoscyam, with 10 grs. Dover's powder at bed time.

October 31st.—Rested badly; pulse 112, feeble; skin moist, and

clammy; tongue pale, clear, and flabby; countenance sunken; a gangrenous spot, about ½ an inch in diameter, has made its appearance in the perineum, on the left of the raphe, and the whole scrotum is tumefied, and purplish in colour; there is no distension at the hypogastrium, and he has passed, within the last fifteen hours, *sua sponti*, two quarts of urine. Discontinue enemata and baths. Apply a carrot poultice, with pyroligneous acid to the perineum. ℞. *Pulv. Cinchon*, ℥ij.; *Elix. Vitriol* ʒij.; *Aqua Oj. M.* A wineglassful 3 times a day; milk toddy freely, with beef-tea. Continue infusion of uva ursi.

November 1st.—Rested better; pulse 96, stronger; the gangrene has not extended, and the scrotum is less tumefied, and not so feeble; skin dry; other symptoms as yesterday. Continue treatment.

November 2d.—Pulse 76, full; the slough has extended some since yesterday, and in the posterior part of the scrotum there is a gangrenous spot, he is stronger however, rests better, and altogether his condition is more favourable. Continue treatment.

November 3d.—Pulse 76; slough is extending, the whole of the perineum and greater portion of the scrotum being now involved; he suffers no pain; passes his urine without difficulty. Continue treatment.

On the seventh of November the entire slough came away, leaving a ragged looking excavation, which occupied the entire perineum and a large portion of the scrotum adjoining. A man's fist could easily have been pushed into the cavity, the bottom of which was in contact with the neck of the bladder; through this opening, about one half of the urine which was secreted, passed. The walls of the cavity were covered with healthy granulations. Continue treatment, and keep the patient turned well over upon his side.

Granulation went on with great rapidity, care being taken to keep the lips of the opening from adhering together by the interposition of charpie. By the 13th of November, the quantity of urine, escaping through the perineal opening, had lessened more than half; and by the 20th of December, had closed entirely. In the mean time, the patient's general health became re-established; the urine was passed without difficulty, *per vias naturales*, and he was discharged cured on 7th of February.

Case XLV.—*Compound Fracture of the Arm.* (From the notes of R. S. Bernard Jr., resident pupil.) James McDonald, æt. 25, an

Irishman by birth, and remarkably stout, was admitted on 16th of December. On the 13th he fell from the topmast head of a large schooner upon the deck, a distance of eighty-five feet, without breaking the fall in the least. He would weigh fully 170 lbs., and his escape from immediate death is remarkable. There is a severe cut upon the forehead where it struck against the combings of the hatch, and the left arm is fractured. Says he remained perfectly insensible until the evening of the 15th; has been freely bled from the arm, a blister applied to the back of the neck, and the fracture dressed by some physician in the country. Complains of headache; pulse 100, full; bowels constipated; countenance has a bewildered expression.

On removing the dressings, found the fracture to be a compound comminuted one of the left arm, about four inches above the elbow. The lower fragment had protruded through the belly of the triceps muscle, making a wound of the size of a dollar, from which oozed several drops of venous blood. The arm was not much swollen, and the wound looked healthy.

It being impossible to apply the ordinary dressings, without running the risk of increasing the injury, the arm was simply strapped to the side with a roller passed around the body, as in the application of Desault's bandage for fracture of the clavicle. Ordered perfect rest, and the bowels to be moved by enema.

On the 20th of December, the tumefaction had almost entirely subsided, and the arm was dressed with splints made of binder's boards, a hole being cut in them just opposite to the wound. The dressings were renewed every fourth day. By the 20th of January the bony union was complete, the external wound entirely healed, and he left the house, with his arm as strong and useful as it ever was, on the 14th of February.

Case XLVI.—*Gunshot wound of the Lung.* William O'Brien, æt. 32, remarkably athletic, was admitted on the 1st of March 1855. On the 26th of February, while in the act of putting a double barrelled fowling piece, loaded with duckshot, on the poop of his vessel, then lying near Hampton, both barrels were discharged, the muzzles not being more than six inches from his left breast. The charges entered obliquely about the 4th rib, four inches from the sternum, and passed out just anterior to the lower angle of the scapula.

A considerable portion of the charge doubtless passed into the lung,

as he has urgent cough, spits blood freely, and complains of excruciating pain in breathing. The whole side, as far down as the pelvis, is tumefied; the patient is pale and haggard, and has evidently lost a good deal of blood. The wound is discharging freely. The fore finger can be easily passed into the anterior wound, and compasses an area of about three inches. Pulse 130, feeble; respiration 44, and confined almost entirely to the right side. The wound has been dressed with flax seed poultices. Ordered cold water dressings, and a grain of opium to be given every hour until he rests.

The patient continued to grow worse, and expired at 1 o'clock A. M. March 2d.

Autopsy, eleven hours after death.—On opening the thorax, by lifting up the sternum with the cartilages of the ribs attached, the cavity of the left pleura was found filled with blood, uncoagulated, and partially diluted with serum. The lung was, here and there, adherent, by recently effused lymph, to the walls of the chest. The 3d, 4th and 5th ribs were fractured near their angles, the 5th being completely shattered, and the fragments driven in upon the pleura. Just opposite to the fracture, the lung—being its middle third—was perforated by several shot, which passed entirely through it, and were arrested by the pericardium. At least one fourth of the whole lung was utterly destroyed, and broke up under pressure of the fingers as readily as a clot of blood. The rest of the lung was greatly engorged, and entirely unfit for the purposes of respiration.

The anterior external wound was two inches in diameter, and all the tissues, for five inches around, were gangrenous. The long thoracic artery had been divided, and the patient had evidently bled freely from the external wound as well as from that in the lung.

It is a matter of surprise that he should have survived so extensive an injury for nearly five days.

Case XLVII.—*Pneumonia—Recovery.*—(From the notes of R. S. Bernard, Jr., resident pupil.) Thomas Harney, æt. 23, of thin, spare figure, was admitted November 15th, 1854. He was in the hospital during the month of April last, with a severe attack of typhoid pneumonia. His case is reported at length at page 375, vol. III. of this Journal. He recovered from that attack with induration of the summit of the right lung, which I thought was probably due to tubercular deposit, as he had lost both parents from phthisis, and, for the last

year had suffered more or less from a hacking cough. Since his discharge from the hospital last May, he has been in his usual health, except an attack of bilious fever about three weeks ago.

He was seized with the present attack eight days ago, after exposure, during sleep, to a draft of cold air. On waking next morning, he was hoarse, feverish, and troubled with cough. These symptoms have gradually increased, except the hoarseness, which has disappeared. Breathing 36, and oppressed; cough loose, not very frequent, and accompanied by thoracic soreness; expectoration scanty, mucous, with bloody striæ, approaching the rusty color; pulse small, somewhat resisting, 120; decubitus on the right side; countenance anxious; bowels open; tongue clean, red and fissured; deep inspiration increases the pain in the right side; his fever is higher at night, and then is accompanied by bilious vomiting; anorexia and thirst. *Physical Signs.* Percussion under the right clavicle, and over the right supra scapular space, flat; dull over the middle lobe, and very dull over the lower. On the left side, the percussion is clear throughout. Respiration in the left lung is puerile; in the right, at the summit, intensely bronchial, with bronchial resonance, slightly bronchial over the middle lobe, and decidedly bronchial over the lower. Ordered 8 oz. of blood to be taken by cups from over right lung posteriorly. ℞. *Tart. emet. grs. ij.; Syr. scillæ,* ℥*ss.; Tr. opii,* ℥*ss.; Aq., q. s.,* ℥*iv. M.* A tablespoonful every two hours.

Nov. 14th.—Passed a restless night, with muttering delirium; decubitus on the back; breathing 52, interrupted; left cheek flushed deep purple; eye dull; expression heavy and unnatural; pulse 112, small and very compressible; bowels moved once since yesterday; tongue dry, clean and cracked; sordes on the teeth; skin perspirable; fever became more intense at 10 P. M., and declined at 3 this morning; cough less urgent; sputa tenacious, scanty and very yellow; thirst continues. Physical signs as yesterday. Discontinue solution. ℞. *Quinia sulph. grs. xx.; Ammon. carb.* ℥*j. M. Pil.* 12. One every three hours. Gum arabic water as a drink.

Nov. 15th.—Rested badly until 3 A. M., when he fell asleep, and slept soundly until 6 o'clock; had no delirium during the night; decubitus on the right side; breathing 28, and easier; pulse 104, small, but has more volume than yesterday; skin naturally warm; countenance more lifelike; tongue still dry and cracked, but probably less so

than yesterday; no stool; feels decidedly stronger; less thirst; sputa more abundant, and very rusty; cough not so troublesome; physical signs unaltered, except that there is a little fine crepitus heard over a small portion of the lower lobe of right lung posteriorly. Continue treatment.

Nov. 16th.—Rested well; decubitus indifferent; breathing 24, quite easy; tongue becoming moist; pulse 76, feeble; coughs very little, and sputa losing their rusty character; percussion less flat over right lung, except at the summit, which remains *in statu quo;* there is decided crepitant rhonchus throughout the middle and lower lobes; patient improving rapidly. Continue treatment. Give milk toddy, and any other nourishment he may desire.

Nov. 17th.—Found Harney convalescing, and he left the hospital well on the 23d.

I agree entirely with the opinion expressed by Dr. La Roche, in his recent learned work, that pneumonia and intermittent fever are two separate and distinct diseases; but they so frequently occur together in the same individual, in the bilious fever regions, that without the free exhibition of the great anti-miasmatic, quinine, we should lose more than half of our cases of pneumonia in this section of the country.

The case just detailed is a very good type of nine-tenths of the cases of acute chest disease which occur during the winter months, in the eastern parts of Virginia and North Carolina.

Case XLVIII.—*Double Pleuro-Pneumonia, with Pericarditis.—Death on the Sixteenth Day.*—(From the notes of R. S. Bernard, Jr., resident pupil.) James Sawyer, æt. 25, of slender frame, but previously healthy, except now and then an attack of intermittent, entered 25th of March. He was seized on 18th, at 3 o'clock P. M., with chill. Has had no chill since, but is much more uncomfortable every afternoon. Has had cough from the commencement, with wandering thoracic pains—the pain has been particularly severe in the left side near the nipple. Breathing is hurried, 40; deglutition painful and difficult; decubitus indifferent; bowels constipated; skin dusky, dry, and extremities cool; no appetite; tongue clammy, slightly furred, red and pointed; nausea and thirst; cough troublesome, and sputa scanty, muco-bloody; pulse 112, small, and very feeble; countenance anxious and distressed. *Physical Signs.* Percussion at the

middle third of the left lung posteriorly dull, and absolutely flat over lower third; clear elsewhere. On the right side the percussion is clear throughout, while the respiration is puerile. Respiration over lower two thirds of left lung bronchial; vesicular at the summit. There is a very slight friction sound on the left axillary space. R. *Ammon. carb.* ʒj.; *Acaciæ*, ʒij.; *Aquæ*, *q. s.*, ℥iss. *M.* R. *Quiniæ sulph. grs. xx.*; *Hyd. submur. grs. viij. M. Pil.* 12. *S.* A teaspoonful of the solution, with one of the pills, every two hours.

March 26th.—Rested tolerably well; decubitus indifferent; breathing 28, easier; pulse stronger, soft, 80; cough less urgent; sputa as yesterday; bowels constipated; no change in the physical signs. Continue treatment, and give the following powder at once. R. *Pulv. rhei., gr. xx.*; *Magnes. calc., gr. xxx. M.*

March 27th.—Found him sitting up in bed eating; was troubled during the night with cough; pulse 72, natural; breathing easy; tongue clean and less red; no pain nor thirst; percussion less dull in left lung, and there is detected some returning crepitus; expectoration improving. Discontinue pills. Continue solution.

March 28th.—Was seized with chill at 12 o'clock last night, with considerable reaction afterwards; cough more urgent, and sputa bloody; skin moist; pulse 100, and very small; impulse of the heart below the natural standard; cannot detect any morbid sound. Ordered 10 grs. of quinine at once, and the dose to be repeated in the morning.

March 29th.—Not so well to day; pulse 96, soft and small; skin warm and dry; thirst and anorexia; physical signs unaltered; bowels constipated still. Ordered 10 grs. of calomel at once.

March 30th.—Slept well, and is better; bowels moved twice; cough loose and expectoration abundant. R. *Syr. senegæ*, ℥ss.; *Tr. opii. camph.*, ʒij.; *Vin. antim*, ʒij.; *Aquæ*, *q. s.*, ℥ij. *M.* A teaspoonful every 3 hours.

March 31st.—Slept badly; breathing oppressed, 44; pulse full, 116; skin moist and hot; percussion flat over lower three fourths of left lung; respiration bronchial at summit, intensely bronchial over the middle and slightly bronchial below; cough urgent, and sputa scanty and bloody. Ordered 10 ounces of blood to be taken by cups from left lung posteriorly. R. *Hyd. submur. gr. xij. Pil.* 12. R. *Syr. scillæ*, ℥ss.; *Tart. emet., gr. ij.*; *Tr. opii.*, ʒss.; *Aquæ*, *q. s.*, ℥iv. *M.* Give a pill, with a tablespoonful of the solution every 2 hours.

April 1st.—Rested well; decubitus on the right side; pulse 120, soft; countenance calm; breathing 32, easier; bowels unmoved; can detect some returning crepitus in the left lung. Add ʒj. tr. digitalis to the solution, and continue treatment.

April 2d.—Seemed to be improving all day yesterday, until 6 o'clock P. M., when he was seized with pain just below the right nipple, which was greatly aggravated by deep inspiration; this symptom has so increased, as to prevent him from sleeping, notwithstanding a large blister, which M. Bernard very properly applied over the region of pain, has drawn well; found him sitting up in bed, and unable to lie down without an increase of his distress, and a feeling of suffocation; countenance haggard; breathing, 50, hurried, interrupted, and panting; pulse 112, and scarcely discernible at the wrist; cough controlled by the pain; skin dusky and cool, especially at the extremities. Physical examination of the chest developes clear percussion at summit of right lung, flat over middle lobe, and dull over the lower, with abundant crepitant rhonchus, on the left side, there is flat percussion over lower three fourths, and dullness at the summit; respiration in the left lung very feeble, with a decided expiratory sound in the lower two thirds. Sounds of the heart almost inaudible. Ordered milk toddy freely; dry warmth externally, and 10 grs. of ammon. carb. every two hours.

April 3d.—Passed a wretched night; decubitus on the back, with the shoulders well elevated; skin cold, and shrivelled, and bathed in perspiration; dyspnœa excessive; pulse thready; countenance cadaverie; is not aware of his situation, and thinks if to-morrow is a good day he will be able to take the stage for his home, distant 40 miles! He continued in this state until 4½ o'clock, A. M., on the 4th, when he departed for "that bourne from whence no traveller returns," having retained his consciousness up to the last moment.

Autopsy, twelve hours after death.—The cavity of the left pleura was filled with yellow serum, containing flocculi of lymph in great abundance; the left lung occupied the scapular space: the upper lobe was completely hepatized, and the lower greatly engorged with blood; its surface was covered uniformly with newly effused lymph. The cavity of the right pleura contained about eight ounces of serum, and the lung was adherent in several places to the walls of the thorax by recently formed lymph bands; its upper lobe was normal, the middle, over a space of three inches in circumference, was hepatised, and the lower

engorged. The pericardium contained two ounces of serum, and the surface of the heart was covered uniformly over its anterior face with a layer of newly effused lymph.

ART. III.—*On the Chloride of Zinc as a Caustic in Chancre.* By JAMES H. CONWAY, M. D., Richmond, Va.

For several years I have been in the habit of using the chloride of zinc as a caustic to chancres, to the exclusion of all other agents of the kind; and although I do not claim originality in the use of a remedy so well known to the profession, yet its application was first suggested in the fall of 1852, by a case of most obstinate chancre, in which it proved so efficient a remedy that I determined to try its effects in cases which would probably yield to the caustic usually employed and highly extolled by Ricord—namely, the nitrate of silver.

In the case alluded to, the chancre was situated immediately behind and below the glans penis, nearly perforating the frænum, and so deep as to cause the apprehension that the urethra would be finally opened, and hypospadias established. After trying a variety of caustics, I finally determined to resort to the chloride of zinc, which was applied but once, and in a few days followed by complete cicatrization of the ulcer. Since then I do not think that I have used any other agent, except in two instances. In the first, I employed the nitrate of silver and afterwards the chloride of zinc, for the purpose of ascertaining the relative amount of pain produced by either, and the patient declared that the latter was the less painful. Certain it is, that the aggregate amount of pain is less from the chloride of zinc, as it is rarely necessary to apply it oftener than once, whereas the lunar caustic, however freely you may use it, generally requires repetition.

In the other case, which I have now under treatment, I have not been so successful with the chloride of zinc; though the ulcer, which is situated upon the external portion of the prepuce, is non-indurated, irritable, bleeds upon the slightest touch, and indeed does not present all of the characteristics of chancre. In consequence of its position, whenever an erection occurs, the surface is stretched and torn, so much so, that afterwards the dressings are covered with blood. The indica-

tions in this case were certainly not for caustics or stimulant applications of any kind, but for a soothing plan of treatment, under which he is now improving. But he had had a suspicious connection, and although subject to herpes præputialis, this ulcer had persisted so long, nearly three weeks, as to induce him to apply for medical aid. And after hearing the history of his case, and though doubtful of my diagnosis, I thought it best to attempt at once the destruction of the ulcer, which might prove to be syphilitic, and accordingly applied, with that view, the chloride of zinc. Having treated probably thirty chancres with this remedy, I can truly assert, that this is the only case in which I have used it, that it has not been followed, after applying it once, and rarely oftener, by the most happy results. In this instance, however, I do not attribute the want of success to the remedy, but to the fact that it was contra-indicated.

The manner in which I apply it, is by making a saturated solution, or, as it is exceedingly deliquescent, by exposing a small quantity to the air it becomes dissolved, and then by means of pieces of paper twisted to a point and filled with the solution, the chancre being carefully wiped dry, it is applied, and again wiped to prevent its spreading. The application is repeated, until a white eschar is formed, and then dressed with dry lint. If, however, I think it has been too freely used, I mop or swab the part with water, which readily dissolves the superfluous quantity applied.

I should scarcely think my experience in the use of this agent worthy of record, were I not fully convinced of its utility. Believing the first indication in the treatment of syphilis to be the destruction of the chancre, the source of the poison to the general system, I do most cordially recommend it as the best preventive of constitutional syphilis, even in many respects superior to the knife.

ART. IV.—*A Case of Scarlatina and Measles Blended.* By J. N. SCHOOLFIELD, Portsmouth, Va.

The following case which has recently presented itself in my practice, is certainly very novel in its character, and is from my personal observation without a precedent. It is analogous to the case of "Va-

riola and Vaccina," published in the February number of the Journal, and in that connection, may possess some interest.

February 15th, 1855.—Was called to visit Joseph Myers aged 4 years. Has had fever for two days. He now complains of his throat. On examination both tonsils are found to be enlarged, inflamed, and ulcerated. He is very restless from constant itching of the surface. An eruption having all the characteristics of scarlatina covers his breast and back. It is not at all ambiguous, but so decided in its appearance, that we have no difficulty in forming a diagnosis.

March 15th.—Difficulty and pain in swallowing. Fever high, eruption vivid, skin hot, hiccough.

March 16th.—Slept badly last night. Harassed by an incessant cough, which made its appearance during the night. Tongue very red, and the papillæ elevated; face swollen; eyes red and injected, and free discharge from the nose. On his face an eruption is presenting itself, very much resembling measles, which disease is prevailing to a great extent among us. The eruption on his back is unchanged in appearance. pearance.

March 17th.—To my surprise this morning I found his face and arms covered with measles. The cough is exceedingly troublesome. The scarlatina eruption on his back and breast, though still evident, and decided in its character, begins to fade, and the condition of the throat is better.

March 18th.—The measles is still coming out on his face, arms and legs, while the scarlatina has nearly disappeared. His cough is better, and the case proceeds as a simple attack of measles. The disease ran its course with much mildness, and convalescence ensued without any unfavourable symptoms showing themselves. In due time, after the subsidence of the disease, desquamation took place, thus confirming the diagnosis of the original attack, if any such had been necessary. We have had very little disease of any kind during the winter, except measles, and that has been of a very mild type. There have probably been some five hundred cases, and so far, not one has terminated fatally.

ART. V.—*A Case of Night Blindness.* By R. H. TATUM, M. D., Chesterfield County, Va.

Jim, a servant boy aged 15, of light color, came under my treatment for hemeralopia* on the 10th of April of the present year. He had been annoyed for several nights with blindness to such a degree that he required to be led by the hand; but on each succeeding day his sight became as perfect as ever. His general health good, no fever or head ache, and his appetite undiminished. His tongue a little dry.

On examining his eyes, I found them lustreless, the pupil expanded and immobile. I ordered calomel gr. vii., tart. emetic gr. i., to be given at once, and followed by magnes. sulph. ʒiii., the next morning. At noon of the same day, ordered quinia sulph. grs. v., and at the expiration of four hours, directed the same to be repeated.

When I saw him the following day there was no return of the disease, and he has remained well up to this time, fifteen days after the treatment.

There was no appreciable cause for the attack. No member of his family has ever had it, and no other case occurred on the estate. Such an affection is not mentioned by Miller, and but barely alluded to by Prof. Gibson. The remedies suggested by Dr. Gibson as recommended by Mr. Bampfield, are repeated purgatives and blistering. It occurred to me from its paroxysmal character, that the cure would be more certain with the above treatment, and attended with much less pain and inconvenience, than that pursued by Mr. Bampfield.

[Hemeralopia, which is a disease of rare occurrence in our country in the genus Homo, is yet met with in the lower order of animals, and all persons who are much accustomed to horses will agree with us in the remark. We have in the course of a large experience and familiarity with horses, observed repeatedly a loss of vision, generally partial, but in one instance complete, in horses whose eye sight would be perfect

* There seems to be some confusion in the use of the terms *Hemeralopia* and *Nyctalopia*, as applied to the two states of vision, in one of which persons are blind by night and in the other, a loss of vision during the day; each word being used nearly as often to express one affection as the other. Lawrence in his admirable work on the eye, advises us to imitate the example of HIPPOCRATES, and use the term Hemeralopia to denote night blindness, whilst the opposite condition or day blindness, may be styled Nyctalopia.—ED.

during the day. The animal as night came on would shew evident marks of blindness, often stumbling, and straying out of the road, requiring the constant guidance of the rider to prevent him from leaving the right path. As a general rule, the horse is able to guide himself through the darkness much better than his rider can do it for him, and yet the frequent exceptions to this rule, which undoubtedly do occur, cannot better be accounted for than by supposing the existence of this affection.

The remarkable report of Dr. Cunier of Ghent, shewing the hereditary transmission of night blindness for six generations in the NOUGARET family, is apropos to this subject. Dr. Cunier shews that of 600 persons descended from Jean Nougaret, who lived two hundred years ago, near Montpellier, and who was himself hemeralopic, about eighty-five also laboured under the same affection. When we remember how remarkable the tendency in horses to transmit their personal peculiarities, such as colour, gait, figure, and even blemishes, to their offspring, we may almost conclude, that years ago, in the palmy days of Old Virginia, some *equine* Nougaret must have appeared, and thus the frequency of the peculiarity alluded to can be explained.—ED.]

LECTURES AND SELECTIONS.

I. *On the Treatment of the more Common Forms of Skin Diseases met with in Edinburgh.* By JOHN HUGHES BENNETT, M. D., F. R. S. E., Professor of the Institutes of Medicine, and of Clinical Medicine, in the University of Edinburgh.

Since the addition of a ward for skin diseases to the clinical department of the Royal Infirmary, I have had ample opportunities of determining what are the more common forms of cutaneous eruption met with in this city, and of trying various kinds of treatment. A short account of the results of my experience in this department, excluding the eruptive fevers, may not be unacceptable to my medical brethren.

Eczema is by far the most common disease met with, both in its acute and chronic forms. The local treatment I have found most

efficacious is that which I recommended, in the August number of the Journal for 1849. It consists in keeping the affected part moist, with lint or linen saturated in a very weak alkaline solution, consisting of soda subcarb. ʒss. to a pint of water. For this purpose it is necessary to cover the moistened lint with oil silk, or gutta percha sheeting, which should well overlap the lint below, so as to prevent evaporation. The usual effect is soon to remove all local irritation, and especially the itching or smarting so distressing to the patient; to keep the surface clean, and prevent the accumulation of those scabs and crusts, which in themselves often tend to keep up the disease. After a time, even the indurated parts begin to soften, the margins of the eruption lose their fiery red colour, and merge into that of the healthy skin, and, finally, the whole surface assumes its normal character.

In private practice, it is often a matter of great difficulty to secure a proper application of the lotion. Individuals are slow to accept the idea that constant moisture of the part is absolutely necessary for the treatment, and hence vigilant superintendence and frequent visits are requisite, in order to watch the progress of the case. Even in the hospital constant watchfulness is necessary, to see that nurses properly cover the eruption; and when, as sometimes happens, this task is given to the patients themselves, it almost always fails. Then there are some portions of the surface which it is very difficult to keep moist and well covered, such as the face and axillæ. But, by carefully adapting lint and gutta percha sheeting, attaching strings to the edges of the latter, so as to keep the whole in its place, I have never failed in ultimately carrying out my object.

In addition to stating what I have found to be useful, it is important to say what I have, on careful trial, ascertained to be useless or injurious. Perhaps no remedy is more generally employed in this and a variety of other skin diseases than citrine ointment, an application that I have always found to irritate and make eczematous eruptions worse. At the same time, there are some very chronic forms of the disease, which I have been told are cured by this preparation, but what these are I have been unable to ascertain. Indeed, all greasy applications whatever, in the majority of cases, are useless, and the patients themselves inform me, are very "heating." In some rebellious chronic instances, I have thought the oil of cade, has been beneficial, applied locally, although I have not yet tried it sufficiently often, to recommend it strongly. In a few cases of acute eczema, I have tried the freezing process recommended by Dr. Arnott, but the salt of the frigorific mixture, and the cold itself, has caused apparently so much agony that I have been deterred from using it, especially when the emollient moist alkaline application is so efficacious. This mode of treatment, however, undoubtedly demands further trial, and I propose to report a more extended experience of it on some future occasion.

Herpes.—This disease generally runs its course in about fourteen days, and requires no treatment whatever, further than an acetate of lead lotion to allay the smarting. It is not very common.

Scabies occurs very frequently, and is cured by a host of remedies. A strong lather, made of common soft soap and warm water, twice a day, answers very well. The question with scabies, is not what remedy is useful, but which will cure it in the shortest period. The most extensive experience at St. Louis has shown, that the sulphur and alkaline, or Helmerinch's ointment cures itch, on an average, in seven days. That sulphur, however, is not the active remedy, I have satisfied myself of by experiment. Soft soap, as we have seen, which contains alkali, and even simple lard, if pains be taken to keep the parts constantly covered with it, will cure the disease as soon as sulphur ointment. I have tried the Stavesacre ointment, recommended by M. Bourguinon, in only a few cases, but found it to answer very well. Its superiority, however, over other applications, I am not yet prepared to admit.

Pemphigus.—This is rather a rare disease, and when chronic, coming out in successive crops, is very rebellious. Two cases which entered the Infirmary last winter were cured in a few weeks, by the weak alkaline wash, applied as in the case of eczema, combined with generous diet.

Impetigo.—This affection in all its forms is very common, and is best treated by the weak alkaline wash, exactly the same as in eczema. In the chronic forms which attack the chin of men, constituting one of the varieties of mentagra, the same treatment cures the most rebellious cases, if the moisture be constantly preserved. For this purpose the hair must be cautiously cut short with sharp scissors, and the razor carefully avoided. If the side of the cheek covered by the whisker be attacked, removal of the hair from thence also is essential to the treatment. A bag or covering accurately adapted to the part affected must be made of gutta percha sheeting, and tied on with strings. This may be covered with a piece of black silk, to allow the individual to go about and carry on his usual occupations. In this way I have frequently seen chronic impetigo of the chin, of from eight to ten years' standing, completely removed in a few weeks. But then the surface must be kept *constantly* moist, a circumstance requiring great care and determination on the part of the patient. When it becomes necessary to shave, flour and warm water, or paste, should be used, and not soap. Alkalies applied from time to time only, as in the form of wash or soap, always irritate, although, when employed continuously they are soothing.

Ecthyma is not a common disease, and usually presents itself as the *E. cacheticum*, requiring in addition to the alkaline wash locally, a generous diet.

Acne is a disease always requiring constitutional rather than local remedies. Although not uncommon in private, it is rare in hospital practice. Careful regulation of the diet, abstinence from wine and stimulating articles of food, watering places, baths, etc., etc., constitute the appropriate treatment.

Rupia.—This disease I have never seen occur but in individuals who have been subjected to the influence of mercurial poisoning. Hy-

driodate of potassium and tonic remedies, with careful avoidance of mercury in all its forms, is the treatment I have found most successful.

Lichen and Prurigo.—In both these affections constant inunction with lard is as beneficial as constant moisture in the eczematous and impetiginous disorders. In the prurigo of aged persons, the *Ung. Hyd. Precip. Alb.* is a useful application, although the disease is not unfrequently so rebellious as only to admit of palliation. The chronic papular diseases often constitute the despair of the physician.

Psoriasis, and that modification of it known as *lepra*, are very common diseases, and are uniformly treated by me externally with pitch ointment. I have satisfied myself by careful trials that it is the pitch applied to the part that is the beneficial agent, as I have given pitch pills, and infusion of pitch, largely internally without benefit. With the hope of obtaining a less disagreeable remedy, I have frequently tried creosote, and naptha ointment and washes, but also without benefit. Lastly, I have caused simple lard to be rubbed in for a lengthened time, but without doing the slightest good. The oil of cade is also very useful, especially in psoriasis of the scalp. Internally, I give five drops each of Fowler's solution, and of the tr. cantharidis. It is rare that the internal treatment alone produces any effect on a case of psoriasis of any standing. If a case resists this conjoined external and internal treatment, I have always found it incurable. About a year ago I carefully treated a series of cases internally, with Donovan's solution, without producing the slightest benefit.

Lupus is a constitutional disease, and must be treated by cod liver oil, and all those remedies useful for scrofula, of which it is a local manifestation. The external treatment is surgical, consisting of the occasional application of caustics, red lotion, ointments, etc., according to the appearance of the sore.

Favus is a very common disease in Edinburgh, and is most readily removed, first, by poulticing the crusts till they fall off, and the skin presents a smooth, clean surface; secondly, by shaving the hair; and, thirdly, by keeping the scalp continually covered with oil, so as to exclude the atmosphere, and prevent the growth of the parasitic fungi, which constitutes the disease. For this purpose, a gutta percha or oil silk cap, must be constantly worn. A continuance of this treatment for six weeks produces a cure in young persons, if combined with cod liver oil, generous diet, and anti-scrofulous remedies internally. I have tried the lotion of sulphurous acid, recommended by Dr. Jenner, and found it successful in a few cases, but the treatment by oil is so easy as to be far preferable to it. Very chronic cases are cured with difficulty, but so long as the oil is applied the disease never returns, and mere freedom from the disgusting crusts is a great gain.

Scalp diseases must be treated according as it depends on eczema, impetigo, psoriasis, or favus, in all cases first removing the crusts with poultices, then keeping the head shaved, and, lastly, applying alkaline washes, pitch ointment, or oil, according to the directions formerly given. Ringworm is a disease I have never seen in Edinburgh, and of what it consists I am ignorant. Some writers apparently consider it to be favus,

and others a form of herpes. On two or three occasions I have seen a scaly disease of the scalp, in the form of a ring—that is lepra, which I have cured by pitch ointment, or oil of cade. My friend, Dr. Andrew Wood, informed me some time ago, that he banished it from the Heriot's Hospital school by condensing on the eruption the fumes of coarse brown paper, and thus causing an empyreumatic oil, or kind of tar, to fall upon the part. This has led me to suppose that it is a scaly disease, and a form of lepra or psoriasis.

So-called *syphilitic diseases* of the skin, are, in my opinion, the various disorders already alluded to, modified by occurring in individuals who have suffered for periods more or less long, from the poisonous action of mercury. A longer time will be required for their cure, but the same remedies locally, conjoined with hydriodate of potassium, in smaller doses, with bitter infusions, tonics, and a regulated diet, offer the best chance of success.

The great difficulty in the treatment of skin diseases, generally consists in their having been mismanaged in the early stages—a circumstance I attribute to their not having, until a recent period, been much studied by clinical students. Many chronic cases of eczema are continually coming under my notice, which, in their acute forms, have been treated by citrine ointment, or other irritating applications, which almost invariably exasperate the disorder. I shall not easily forget the case of one gentleman, covered all over with acute eczema, who had suffered excessive torture from its having been mistaken for psoriasis, and rubbed for some time with pitch ointment. In the same way I have seen a simple herpes, which would have readily got well if left to itself, converted into an ulcerative sore, by the use of mercurial ointment. Nothing is more common than to confound chronic eczemas of the scalp with favus, although the microscope furnishes us with the most exact means of diagnosis. I need scarcely say that the correct application of the remedies I have spoken of can only be secured by an accurate discrimination, in the first instance, of the diseases to which they are applicable.

The general constitutional treatment in all these cases seldom demands aperient or lowering remedies except in young and robust individuals with febrile symptoms. In the great majority of cases, cod liver oil, good diet, and tonics are required. In a few instances, sedatives, both locally and internally, are necessary to overcome excessive itching or irritation. These the judicious practitioner will readily understand how to apply according to circumstances.—*Monthly Jour. of Med. Sciences.*

II. *On the Development of Cancer by Cells and by Fibres. Communicated to the Imperial Academy of Medicine.* By M. MANDL.*

"Mr. President.—M. Velpeau in his last address, has done me the honour to class me among the microscopists who do not admit the existence of characteristic cancer cells. I beg to say a few words to the Academy on my reasons for so thinking:—

"Shortly after Muller, in 1839, discovered cells in cancerous tumours, I published my observations in the *Archives de Médicine.* But in 1843, I owned that the sanguine hopes which I had at first formed of the advantages to arise from the employment of the microscope in the examination of such pathological specimens, had not been realized; and my researches since then have confirmed this opinion. I had soon abundant opportunities of examining tumours which had appeared to clinical observers to be cancerous, from their origin, progress, and fatal termination, but which contained none of the cells considered by Lebert to be characteristic of the malady. I can remember cases of epithelial and fibro-plastic tumours, but I would more particularly direct attention to cancers of the retina. In four out of five tumours of this last kind, extirpated by Sichel and Bérard, it was impossible to discover any specific cell; and yet subsequent general infection left no doubt as to their malignant character.

"On the other hand, in the cells found in cancerous tumours, I have not observed the characters which they are said to present in the majority of cases. According to M. Lebert, the nucleus of the cancer-cell has always a mean diameter of, from the $\frac{10}{1000}$th to the $\frac{15}{1000}$th of a millimêtre. (*On Cancer*, p. 30.) Yet in encephaloid tumours, I have found the nuclei not above the $\frac{5}{1000}$th or the $\frac{8}{1000}$th of a millimêtre; and in such cases it is impossible to distinguish them from the other nuclei of normal tissues. Again, as to the nucleoli, I have often found their characters very imperfectly marked. In M. Lebert's work we find examples of these inferior dimensions in cancers of the bones, the stomach, etc. As good and even better observers than M. Lebert, believe that it is necessary to take into consideration all the elements, and also to know the history of the disease before pronouncing a judgment upon

* The debate on cancer, which has occupied the French Academy of Medicine for six months past, is not yet concluded, and the struggle between the *Clinicians*, with the veteran *Velpeau* as their leader, and the Micrographers, claiming to diagnose the existence of cancer by the microscope, is still being waged with unusual ardor.

We have already noticed (No. I, vol. IV, p. 63,) this debate in our pages, and we now present the very original suggestion of the eminent microscopist, Dr. Mandl, on the point in dispute. Although the discussion has brought the most celebrated men in Paris to their feet, yet we must say that the theory of Dr. Mandl has more originality about it than any thing which has yet been proposed; and in truth, if we accept his idea, the question before the Academy can be settled to the satisfaction of both parties.—ED.

its nature. Does not this show that the cell is not sufficiently characteristic of cancer?

"The truth of this is proved, not only by observation, but also by the laws governing histogenesis. It seems to me that in order to solve the problem which we are at present studying, it is indispensably necessary that we engage in the comparative study of normal histology, and especially in the study of the development of the tissues. Space precludes me from entering into any detailed explanation of development, so far as it regards this subject; but I shall briefly state the results of my researches.

"All the tissues of the organism form two grand series; the one composed of cells and scales (*ou lamelles*), the other of fibres; and this essential distinction characterizes the different elements from their very first appearance. Nuclei placed in a soft amorphous substance, became surrounded, in the first instance, by membranes; they increase in size, multiply, and constitute the cells, of which the glandular, epithelial and other tissues are composed. In the second class, on the other hand, the nuclei are placed in an amorphous, homogeneous, solid substance, which splits, and goes on subdividing into more and more delicate fibres, so as eventually to constitute a fibrillated tissue. There is no cell formation in all this series of organic elements, among which may be classed the fibrous, cellular and serous tissues, etc.

"This principle of development and of texture, inherent in each series of the tissues, is rigorously maintained in all their various physiological and pathological phases. In the normal renovation which accompanies secretion, growth, etc., as well as in anomalous renovation or in regeneration, we always observe that cells are developed in those places where cells originally existed, and that fibres are developed in the other tissues. Although hypertrophy may occur, the same principle continues to preside over the production of the new elements; fibres do not produce cells, nor cells fibres, but cells are always developed in the midst of cells, and fibres in the midst of fibres.

"Facts have proved to me that these principles hold good in the case of cancer. The cancerous diathesis may affect the blastema, which ought to produce either cells in the glands, scales in the epithelial, or fibres in the fibrous tissues; and according to the nature of the tissue infected by the diathesis, the morbid blastema will produce either cells or fibres. The product will then be characterized according to the species of the affected blastema; and we will have either cancer (*cancer à cellules*), fibro-plastic tumours (*cancer à fibres*), or cancroid growths (*cancer à lamelles*). But if it be permitted to us in *most*, though not in *all* cases, to recognise the alteration produced by the diathesis in the cells—that is to say, if we are allowed to recognise the cancerous *cells*, and to distinguish them from other analogous elements—why may we not also take into account *fibres* and *scales* as elements of cancerous tumours? So long as we are unaware in what respect fibres and scales are altered when they are produced under the influence of the cancerous diathesis, so long will the microscope continue to give imperfect information to the surgeon in the diagnosis of tumours.

"As to the frequency and gravity of recurrences, all histologists know that there is no element which is increased, developed, multiplied and regenerated, with so much facility as the cell. Fibres are much more tardy in the stages of their development. Now, in which of the varieties of cancer are the recurrences the most frequent and the most serious? Which species extends most rapidly, invades neighbouring organs most speedily, and destroys most energetically the whole economy? Undoubtedly it is the *cancer with cells* (*cancer à cellules*). The conditions are completely changed when the cancerous diathesis affect a blastema which ought to produce fibres; and when we see it form incompletely developed fibres, we call it the *fibro-plastic element.* Fibres, in general, are developed very slowly. I have seen a regenerated tendon presenting incomplete fibres at the end of seven years—that is to say, there was a blastema in which fibrillar division had not been completed. Thus the microscope is capable of informing the practitioner of the severity of the affection, and it also enables him to pronounce a proper prognosis as to its course, and as to the greater or less probability of its recurrence, inasmuch as it acquaints him exactly with the nature of the elements which constitute the tumour.

"I believe, then, that cancer, capable of occasioning general infection, can exist without the cancerous cell—that heteromorphous element which has been considered to be a peculiar and specific product of the diathesis—being present. This belief of mine has been long ago expressed by M. Velpeau, as well as by Bennett, Paget, Virchow, Vogel and others.

"The cancerous diathesis may affect cells, scales (*lamelles*) and fibres, and accordingly there are as many different varieties, yet microscopical anatomy agrees with clinical observation in classing them together as one family."

CHRONICLE OF MEDICAL SCIENCE.

MEDICAL PATHOLOGY AND THERAPEUTICS.

1. *On the Use of Wine as an Enema.* By M. ARAN.

It very often occurs in practice that the necessity for stimulant and nourishing food, after long and severe disease, is undisputed, and yet, from some disorder of the digestive organs, and frequently from the irritability of stomach following upon the administration of medicine, the physician is prevented from sustaining his patient as much as would

be desirable. For the purpose of fulfilling the indications in such cases, M. Aran, in the *Bulletin de Therapeutique*, proposes the use of wine injections, thus avoiding any interference with the stomach, and yet effectually introducing nutritive matter into the system.

Having found vinous enemata of great utility in chronic diarrhœa, M. Aran has, for the last three or four years, administered them in slow convalescence accompanied with irritability of the stomach.

He has also obtained great and unexpected advantages in phthisis, having at first administered the wine on account of the accompanying diarrhœa. When the disease is advanced, little, or only temporary, benefit results; but, when given at an earlier period, and associated with cod-liver oil or other means, the wine does exert a salutary influence that merits attention. In gastralgia, while the general debility seems to indicate the use of tonics, yet cannot wine be given, even in small quantities, without exciting a sensation of burning; but in several examples of this the vinous lavements have not only restored strength, but have so diminished the gastric irritability, as to allow of a little wine being taken with the food. Another form of dyspepsia alike susceptible of benefit is vomiting, with the rejection of alimentary matters—the strength and *embonpoint* rapidly returning under the use of the enemata.

But the affection in which M. Aran has been most surprised at the amount of success obtained is chlorosis. Influenced by the so prevalent opinion, that iron is the specific remedy, he at first gave it in conjunction; but he afterwards omitted it, only prescribing, besides the wine, general frictions with an ammoniacal liniment, and a powder consisting of bismuth, rhubarb, and valerian. In a few days the patients seemed to have recovered their normal health just as if iron had been given, and that even in severe cases. In their relation to iron, cases of chlorosis may, indeed, be divided into three categories. In the first and most numerous, iron properly administered furnishes a durable cure. In others a rapid amelioration ensues, which is followed by a relapse on its discontinuance. Temporary amendment attends its resumption, and so on for years, iron thus becoming a constant necessity. Thirdly, there are not a few cases in which iron fails altogether, or in which the amelioration never rises to the dignity of a cure. M. Aran has also advantageously employed the injections in various other conditions characterised by debility, and especially in paludal, syphilitic, or cancerous cachexy, in some cases of anasarca, and in different circumstances in which alcoholic stimuli are indicated.

2. *Ulceration of the Frænum Linguæ in Hooping Cough.* By GAMBERINI and ZITTERLAND.

The curious fact that an ulcerative point on the frænum of the tongue is almost invariably present in hooping cough, was first noticed by Zitterland in *Schmidt's Jahrbucher* for 1844. It makes its first appearance as a vesicle, gradually enlarging and deepening as the disease progresses, and disappearing as the cough abates.

M. Gamberini, in the *Archives Generales* for February, gives an interesting paper on the subject.

He has seldom seen a round ulceration, it being usually placed transversely to the frænum, and occasionally it is found situated at the lower part of the body of the tongue, near the frænum. M. Gamberini believes it is probably produced by the contusion of the frænum against the cutting edge of the incisors during the paroxysms. In some cases, in which the tongue, in place of being carried out during the cough, was retracted and drawn towards the pharynx, the ulcer was not present. He has never met with the appearance in other descriptions of convulsive cough; but if in these the tongue is carried against the edge of the incisors, it is so with much less frequency and constancy.

There will be no difficulty in testing the theory of M. Gamberini with regard to this affection, for the ulcer, whilst it may be occasionally absent in children who have teeth, should never be found in those who have not yet cut their teeth, as any contusion of the frænum, under such circumstances, cannot exist.

3. *Parsley Seed in Intermittent Fever.* By M. JORET.

The increasing difficulty in obtaining the true cinchona bark, and the great necessity for a cheap substitute for quinine, has led to many experiments with various other vegetable extracts, some of which have been noticed in this journal. We would more especially call attention to the use of the *quinoidine*, or amorphous quinia of Liebig, as employed by Dr. Da Costa (*Medical Examiner* for May), and the reports of Upshur, Cullen and Pepper, on the effects of quinidine in the same disease. *Va. Med. and Surg. Journal, Vol. IV., No. II., p.* 130.

MM. Joret and Homolle (*Union Medicale*) propose the use of parsley seed, or the active principle they contain, in the treatment of intermittent fever.

"M. Joret discovered the febrifuge power of parsley seed (*Apium petroselinum*) accidentally in 1847, when he administered a decoction of this substance with excellent effect in a quotidian fever. Subsequent experience in about one hundred cases showed that this success was not fortuitous. The decoction is made by boiling for a short time 25 to 30 drachms of the seeds in a quart of water, and, as it does not keep well, it should be made as wanted. More recently, MM. Joret and Homolle have separated the active principle from the seeds and termed it *Apiol*. It is in the form of a yellow, oleaginous fluid, having a special odour and acrid taste, and may be administered in doses of five or six drops in tisane. Owing, however, to its acrid taste, it is best given in capsules, each capsule containing 25 centigrammes. The following syrup is readily taken by children:—Apiol 5, and white sugar 1000 parts. Rub them well together and dissolve at a gentle heat in 500 of water. In quotidian ague, four capsules are given five or six hours prior to the paroxysm, and in tertian the same dose is given on the apyretic day. In quartan, double the dose is given two days in succession. Generally,

the first dose in quotidian and tertian, and the second dose in quartan, suffice to cut the fever short, after which the remedy must be given in doses diminished daily. The mean quantity of apiol required has been from 1½ to 3½ grammes, according to the type of the fever. The total number of cases in which the apiol has been hitherto tried in France, Martinique, Rome, Ajaccio and Perpignan, amounts to 116, and of this number 66 were cured, the proportion of cases being 86 per cent. of the cases treated in France, and 50 per cent. of those treated in the other above-named places.

"As far as the author's researches have extended, the action of *apiol* in *intermittent neuralgia* is no less powerful than that of quinine; and small doses have been found very useful in the *sweating of phthisis*. During its employment as a febrifuge, it was found possessed of very remarkable powers as an emmenagogue, recalling the discharge when long stopped, or regulating the function in dysmenorrhœa from irregularity, paucity, or difficulty of the flux. The minimum dose of 20 to 30 centigrammes per diem, should be given for a week prior to the menstrual period."

4. *On Chlorosis Simulating Phthisis.* By M. RILLIET.

In this Essay M. Rilliet describes a condition of which he has seen many examples, and which he does not think has sufficiently excited attention. Young girls, or young wives, generally after prolonged grief or violent emotions, present the following train of symptoms, viz. general *malaise*, sleeplessness, palpitations, panting breathing, decoloration of countenance, indigestion, dysmenorrhœa, or amenorrhœa. These symptoms of chlorosis may persist for several weeks, when another series appears, giving to the condition a different signification. The pulse becomes accelerated, as in fever, and there is general or partial increase of heat, accompanied by profuse general sweating, which occurs sometimes at night. Rapid and progressive emaciation follows, and the patient becomes so feeble as to be confined quite, or partly, to bed. After a month or two, but rarely before, a cough suddenly appears, and rapidly gets worse. It is dry and short, sometimes paroxysmal, and very distressing, and is accompanied by violaceous cheeks, an increase of transpiration, and sometimes by hæmoptysis. These signs lead to the fear of phthisis, but an examination of the respiration only furnishes negative signs, while the heart and large vessels reveal the chlorotic condition. There is also present an excited state of the nervous system, and melancholy. The appetite is capricious, rather than absent, and articles of food are sought for possessed of a strong taste, little in harmony with the febrile condition of the patient.

These symptoms persist, with varying intensity, for several weeks. Menstruation is arrested; but at its periods the febrile state becomes exacerbated, or after a temporary calm, all the symptoms resume their former character. There may be every shade between a mere suspicion of disease of the chest, and a well-grounded fear of its existence: and although M. Rilliet now believes he is able to assure himself of the

true state of such patients, this results from the experience he has acquired from observing the recovery of cases offering the same negative and positive symptoms. The purity of the respiratory murmur will not, however, always assure us of the absence of tubercles, for cases of acute, or even subacute, phthisis, and even in a somewhat advanced stage, do not always furnish auscultatory signs. As these, too, are the very cases oftenest simulated by chlorosis, M. Rilliet endeavours to lay down some marks of distinction between the two conditions.

1. In febrile chlorosis, well-marked chlcrotic symptoms precede the cough, while, in the great majority of cases of phthisis, the cough precedes the general symptoms. 2. The chlorotic cough sometimes resembles, in its *timbre* and mode of return, hysterical cough. In other cases, it is not to be distinguished from the phthisical; but it is often remarkable for the rapidity with which it increases, contrasting by its intensity with the complete absence of stethoscopic signs. 3. The fever is sometimes as ardent as in phthisis, but it differs in not usually taking on the hectic form in the evening, the exacerbations being very irregular and usually diurnal. 4. Contrary to what is observed in the phthisical, but in accordance with what often takes place in the hysterical and hypochondriacal, the patients are easiest in the evening; and they are sleepless rather from the excitement of their nervous system than from any increase of fever. 5. The pulse in the chlorotic is vibrating, nervous, tense, and often irregular,—in a word, "palpitating;" while in phthisis, it presents a special character more easy to appreciate than describe. It is undulating, one pulsation running into another, giving to the touch a sensation analogous to that which would be furnished to the sight by two fingers rapidly turning around each other. 6. The sweatings as copious as in phthisis, are less regular, succeeding usually the paroxysms of cough, and occurring as often in the day as at night. 7. The emaciation is as complete and as rapid as in well-marked phthisis. The cheeks become violaceous, but the paleness of the face does not assume the dead-white of common chlorosis. 8. The menses are very early suppressed, and when they should appear, we have sometimes a remission, and sometimes an aggravation of symptoms. When, however, they are suppressed in phthisis, it is at an advanced period, and without the production of any special effect. 9. The desire for high-flavoured aliments during the febrile condition is not observed in phthisis. 10. It is the combination of the above marks of distinction, the progress of the disease, and the influence of remedies, that establish the diagnosis completely. The criterion derived from the progress of the disease is the more important, inasmuch as there are undoubted cases in which chlorosis and tubercle are associated; and the possibility of such a coincidence must render our prognosis reserved, until a notable melioration justifies our treatment. Still, it is to be observed that it is rather the chronic than the acute febrile chlorosis that masks phthisis.

The disease should be treated with promptitude. Iron must be given, without regard to the cough, fever, or other symptoms which may seem to contra-indicate it; but alone it will not suffice, requiring to be com-

bined with change of air, good hygiene, and abstraction of predisposing causes.—*Archives Gén.*, February, 1855. *Med. Times and Gaz.*

5. *On Fatty Liver in New Born Infants.* By Dr. LANDRE, of Surinam.

There is a strange predisposition amongst the infants of Surinam to become the victims of that peculiar pathological condition, called "fatty liver," and Dr. Landre has given some interesting observations on the characteristics of this affection, which we find in the Medical Times and Gazette.

The disease treated of by the author is usually considered in the colony to be a chronic inflammation of the liver, and is treated by local bleedings, calomel, hydrargyrum cum cretâ, etc. It principally attacks the children of Europeans and people of colour, and seems to be hereditary. Scrofula, syphilis, or arthritis may, in by far the majority of cases, be discovered in the parents. Increased formation of fat, combined with poverty of blood, appears to be the origin of the disease. The children in whom this affection of the liver becomes developed, soon after birth exhibit a general morbidly fat condition; then the face is bloated and puffy, the cheeks are pendulous; the skin forms thick folds on the neck, the buttocks, and the thighs; it is pale, dry and cool (chlorosis gigantea). Nutrition is imperfect; there is œdema of the feet and hands. To the touch, and on percussion, the liver presents itself as a hard, resisting tumour, subsequently becoming tender; its circumference sometimes increases so much that it appears to be continuous with the spleen, which is always hypertrophied. The author did not observe either icteric discoloration or fever. Often in the beginning of the affection, there was a considerable miliary eruption on the chest and abdomen; desquamation of the cuticle, with the secretion of a viscid fluid, also took place. In no case was abdominal fluctuation observed. The patient sank from general exhaustion.

The single *post-mortem* which the author had an opportunity of making, exhibited only œdema of the hands and feet, more than ordinary accumulation under the skin in general, serum in the pericardium, and enlargement of the liver. The latter was hard, pale, and of a yellow colour. On section, it was yellow, dry, homogeneous; its vessels contained but little blood; there was little change of tissue perceptible to the naked eye. No trace of previous inflammation existed (fatty liver?) As to treatment, the preparations of iodine and iron (particularly the syrup of iodide of iron), combined with a nitrogenous diet, were the only remedies the use of which was attended with any favourable result. The author, in conclusion, relates a case in which, under this treatment, recovery took place, although the disease had already made considerable progress.

SURGICAL PATHOLOGY AND OPERATIONS.

1. *On Extirpation of the Uterus.*

The annals of modern surgery record many bold innovations on the customs of our fathers, and many a brilliant experiment made in the amphitheatre. Having ventured to tie all the arteries of the body, not even excepting the brachio-cephalic and the aorta itself, the modern surgeon now seems to have entered upon a new field, and the journals for the last few years, have frequently recorded the most tremendous and bloody operations for ovarian disease, abdominal tumours, and uterine enlargements; attempts requiring such an amount of hazard in their performance, as would hardly have been countenanced fifty years ago.

We called our readers' attention in a late number of the Journal, (No. V., Vol. IV., p. 414,) to Dr. Atlee's report of thirty cases of ovariotomy treated by him in the last ten years. We also (No. IV., Vol. IV., p. 338, reported the extirpation of the uterus by way of the vagina, in a case of inverted uterus. This operation was performed by Dr. Geddings, of Charleston, S. C. We now desire to present to the notice of the profession, the extirpation of the uterus by the *abdominal section*, which has been thrice performed in this country in the last few years, and has resulted successfully twice in three times.

The extirpation of the uterus by the abdominal section, is a much more formidable affair than the one required by the way of the vagina. In Dr. Geddings' case, for instance, the uterus was inverted and hung down between the woman's thighs, in which condition it had remained for eighteen years. To draw down the organ as much as possible, and pass a ligature around its attachments, was comparatively easy, and one sweep of the knife completed the operation; but in the attempt to extirpate the uterus *in situ*, greatly enlarged, and only to be reached by an incision of the peritoneum for not less than six inches, the difficulties to be anticipated are so serious as to make the boldest tremble.

The first case which we shall report will be found in the American Journal of Medical Science for April 1855, and was performed by *Professor Peaslee, of Maine*, who has with great fairness and candour laid the history of the case before the profession.

The patient had a tumour reaching from near the pubis to the umbilicus, which was pronounced by Dr. Peaslee to be an ovarian tumour. His examination was made with great care, and a sound was introduced into the uterus, which was found very moveable, and apparently having but little connection with the disease.

The operation of ovariotomy having been determined on, Dr. Peaslee made his excision through the abdominal parietes, and found that what was supposed to be the enlarged ovary, was a tumour attached to, and

a development from, the uterus itself. The operator having punctured the tumour with a trocar, expecting to find fluid, at once determined to extirpate the entire organ. A ligature was passed around the uterus as low down into the pelvis as possible, and the diseased mass was removed. The patient lived until the fifth day after the operation, and seems to have died from an unfortunate protrusion of the bowel, which became strangulated between the stitches of the incision. Dr. Peaslee attributes his patient's death to this accident.

Scarcely had we finished the perusal of the above report, when *Dr. Kimball, of Lowell, Mass.*, presents the history of an extirpation of the uterus, performed by him, which has resulted successfully. In this instance, the operator was satisfied that the enlargement was uterine, and boldly proposed to extirpate that organ. A large abdominal incision exposed the tumour, which was laid open freely, and the fibrous mass within being protruded, was taken off. A double ligature was passed through the organ, low down in the pelvis and tied securely. The whole uterine mass was then removed, with the exception of the cervix, which was below the ligature. Two years have passed away, and the patient is said to be in perfect health.

Dr. Kimball's case, which appeared in the Boston Medical and Surgical Journal for May 3, 1855, was hardly in print, when *Dr. Walter Burnham*, of Lowell, reminds the profession of *his* claims to priority in the performance of this operation, and states that three months prior to Dr. Kimball's case, he *extirpated the uterus and both ovaries* by the abdominal section, which resulted successfully, and which case was reported in the Montreal Medical Journal, and also in Nelson's Northern Lancet, January 1854.

We doubt whether three such cases as these have ever appeared on record in so short a space of time, and in truth it is doubtful whether this operation has ever before been performed. We have, therefore, placed them before our readers, not vouching at all for the accuracy of the report; although, from the reputation of the gentlemen who gave the details, there is no reason to suspect any incorrectness or exaggeration.

2. *Extirpation of a Testicle containing Fat, Hair, and Bony and Cartilaginous Formations.* By J. W. R. TILANUS, M. D.

In the foreign correspondence of the Medical Times and Gazette, Dr. Tilanus relates the history of a case which is so rare as to deserve some notice at our hands.

Dr. Tilanus' case is that of a young man, aged 20, otherwise in good health, whose left testicle, even at the earliest period of life, appears to have been larger than the right; along with this, hydrocele existed. The testicle gradually increased in circumference, and, a fortnight before the date of the observation, had, after a fatiguing walk, become much larger and more painful. An explorative puncture having been made, about six ounces of a milky fluid were discharged. The testicle was now twelve inches in length and six in width; posteriorly and in-

feriorly, it was firm and hard; anteriorly, it was indistinctly fluctuating; the spermatic cord, inguinal glands, and skin of the scrotum, were healthy. A congenital, fibroid cyst was diagnosed.

Extirpation was successfully performed under chloroform by Heer de Waal Malefyt. The testicle, which was still entirely surrounded by the tunica vaginalis, filled with a sanguineous fluid, consisted of two cavities, separated by a firm partition of one inch in diameter, towards which the cord ran. The lower cavity contained six ounces of a thin, milky, flaky fluid; its wall, which consisted of areolar tissue, was covered on the inside with epithelium; the other contained a small quantity of fat, and was filled with a ball of hair as large as a man's fist, with fat (crystals of margarin and oil globules); the hairs were long, well formed, and furnished with bulbs. The wall was in parts covered with epithelium and smooth, in others it was rough with deep depressions, out of many of which long hairs arose. The others were the openings of empty hair follicles. This part consisted of well formed skin, with layers of epithelium, corium and adipose membrane, in which last lay numerous sudoriparous and very large well-filled sebaceous glandulæ. The wall further consisted of layers of fibrous tissue. On the partition between the two cavities was a crest-like projection, formed of cartilage, with large and small cartilage cells and transparent intervening substance. Lastly, in several places were very thin laminæ of bone, in which lay scattered bony corpuscles of irregular form. No trace of the substance of the gland was to be found.

3. *Abscess of the Breast.* By M. CHASSAIGNAC.

M. Chassaignac commences this memoir, by describing the varieties of mammary abscess, that are distinctly distinguishable by appropriate local signs. Thus they may all be divided into two principal classes,—those which are *external* to the gland, and those which are seated *within* its substance, and those which may be termed *peri-mammary* and *endo-mammary*, or *extero* and *intero-mammary* abscesses. The peri-mammary abscesses comprise the subcutaneous and the postero-mammary. The *subcutaneous* are subdivided into circumscribed phlegmon, angioleucitis, and diffused phlegmon. The *postero-mammary* abscesses are either simple phlegmons, hygromatic, that is, located in the sub-mammary serous tissue, and cold abscess dependent upon disease of bone. The *intero-mammary* abscesses are divided into the *canaliculated* and the *intra-lobular*, the pathognomic proofs of the former consisting in the issue of pus from the galactiferous orifices, upon the application of a cupping-glass, and, in a less degree, the presence, during lactation, of milk in the pus.

M. Chassaignac relates twelve cases, as exemplifying his mode of treating these abscesses. He opens them immediately that fluctation is perceptible, freely washes out their contents, and then dresses them with adhesive plaister, upon what he terms the *occlusion** plan. The arm is to be kept suspended at the side. In this way, about a fifth of the entire number of mammary abscesses that come under his care are

united by the *first intention*, and that not only in the subcutaneous variety, but also in the intero-mammary, when the lacteal canals are in contact with the pus. Even when the success is less absolute than this, the inflammatory phenomena became much diminished in intensity; and it is remarkable to observe, even the next day, after the plaister is applied, how well even firm pressure can be borne. At the end of twenty-four hours, he examines by palpitation and pressing the condition of the breast, to ascertain whether the morbid sensibility is on the return, or has completely disappeared. If there is even a slight return, the dressings are removed, the breast explored, any pus that has collected being removed, and secondary union now resorted to. As the washing out the contents of an abscess, immediately after the incision, made in a part where sensibility has become so exaggerated, is a very painful procedure, chloroform is often employed, but the necessity of resorting to this may be avoided by taking plenty of time, and cautiously washing out the cavity by means of a well-guarded flexible tube.—*Gazette Médicale*, 1855.

4. *On the Locality of Gonorrhœa.* By M. MARCHAL DE CALVI.

If, in a case of gonorrhœa, a very flexible caoutchouc bougie be gently passed into the urethra, at a certain point, it will induce pain, and its progress will be more or less arrested. Among 69 cases, so examined by M. Marchal, such signs of lesion were exhibited in 60. The arrest took place in 4 at between 9 and 14 centimetres, in 13 at between 18 and 20, and in 43 at between 15 and 17 centimetres. This last point corresponds, in the majority of cases, to that at which the subpubic curve of the urethra takes place, and as the length of the penis is very variable, the lesion may still, in the others, be situated in the same locality. In 36 of the 69 cases it was the first gonorrhœa; and it is important to remark that the lesion is not the product of protracted gonorrhœa, it having been absent only in 1 out of 13 cases in which the gonorrhœa had existed only a month or less. That this part of the urethra should be the seat of gonorrhœa, is contrary to the general opinion, which fixes it at the *fossa navicularis;* and it is possible, at the commencement and in very slight cases, that the inflammation is confined to the anterior part of the canal. However this may be, in confirmed clap, the seat of the lesion is lower down; and the indefinite prolongation of the affection, and the production of stricture, are best prevented by at once attacking the disease there by means of the *porte-caustique.* The benefit often derived from the application of leeches to the perineum in old gonorrhœa, is confirmatory of the above view. Many persons suffer from stricture after gonorrhœa, without being aware of it, as the emission of urine is not sensibly impeded as long as the vigour of the bladder and muscles are enabled to overcome the difficulty, this not being perceived until they are enfeebled.—*Gaz. des Hop.*, 1855.

* For an account of this, see the British and Foreign Med. and Chir. Review.

5. *Fissure of the Palate.* By JULES CLOQUET.

An interesting memoir on this subject, with an account of six successful cases, by Dr. Jules Cloquet, is published in the *Gazette Médicale de Paris*, for March 3d. The method employed by M. Cloquet is to cauterize the upper angle of the fissure for the extent of a few lines, by the application of the pernitrate of mercury, the hot iron, or loop of platina wire, rendered incandescent by means of the electric current. Not less than seven or eight days ought to elapse between each operation, in order to allow the parts to contract, and to consolidate the union. In one case after twenty-four applications of the pernitrate of mercury, with a pointed stick of soft wood, a fissure of the whole extent of the soft palate, caused by syphilitic ulceration, was completely united. In another case, in which the fissure was congenital, the same number of operations by means of the red-hot iron, were sufficient to restore the parts perfectly to their normal state. Where the parts are firmly adherent to the bone, they may be separated by the knife before applying the caustic, as in the ordinary operation by sutures. The operation occasions very little pain, is exceedingly simple, and requires no change in the regimen or habits of the patient.

TOXICOLOGY.

1. *Chloroform in Lead Poisoning.* By M. ARAN.

This remedy is recommended by M. Aran, physician to the *Hôpital St. Antoine*, in Paris. He has just published a somewhat lengthy paper on its use, in which he gives some very interesting illustrative cases. One of these occurred in a house painter, æt. 31, who was affected with lead colic for the second time, after having followed his trade for twenty years. There was obstinate constipation, bilious vomiting, pain in the epigastrium, tormina, scanty urine, and a very slow pulse—only 48. A compress, on which nearly a drachm of chloroform had been poured, was placed on the umbilical region, and retained there for several minutes. In spite of the sensation of heat and burning occasioned, immediate relief was experienced by the patient. In addition to this a sulphureous bath was ordered; a mixture containing 30 drops of chloroform was administered; and a domestic enema was prescribed, to be followed by a small clyster, with 20 drops of the anæsthetic in it. This treatment was continued for a week with great benefit, the chloroform being given morning and evening; and 16 days after admission the patient was discharged cured. Rather an interesting incident occurred in this man's case—he swallowed one day, by mistake,

nearly an ounce (30 grammes) of chloroform. Symptoms of narcotic poisoning appeared, but the patient recovered satisfactorily. Several other cases are given in which the same treatment proved very efficacious.

M. Aran says that the compress saturated with the chloroform should be covered with dry compresses, and that it should be allowed to remain in contact with the skin from 2 to 5 minutes. After the preliminary large doses, the following mixture should be used: ℞. *Chloroformi*, gtt. 20-50; *gum tragacanth*, ʒj; *syr. simplic.*, ℥j; *aquæ*, ℥iij:—*misce.* Dose:—a teaspoonful frequently. He gives the following formula for the chloroform enema: ℞. *Chloroformi*, gtt. 20-50; *gum tragacanth*, ʒij; *ov. vitelli.*, j; *aquæ*, ℥iv:—*misce.*

The patient should be desired to retain these enema as long as possible.—*L'Union Medicale.*

2. *Iodide of Potassium in Lead Poisoning.* By M. MALHERBE.

It has been asserted by MM. Natalis Guillot and Melsens, that the administration of the iodide of potassium is the best means for ridding the system of lead and mercury, inasmuch as the insoluble compounds which the salts of these metals form with organic substances, are all soluble in the iodide of potassium, which is a salt very easily and rapidly eliminated from the animal economy. Mialhe denied these assertions, which were found on experiments made with dogs. M. Malherbe, chief physician to the Hôtel-Dieu at Nantes, has recently tried the drug in some cases of lead poisoning, with great benefit. He never gave more than 15 grains daily, but often much less. His experience of the remedy has not been sufficiently extensive to enable him to arrive at definite conclusions; but he thinks, from the trials he has made of it, that the following deductions are warrantable:—

1*st.* In lead poisoning, elimination of the metal takes place naturally by means of the urinary organs, which is probably due to the influence of the alkaline chlorides contained in the animal fluids, as has been thought by M. Mialhe. But this eliminative process is not sufficiently rapid to produce a spontaneous cure of lead poisoning.

2*d.* This elimination of lead by the urine is rendered much more active by the use of the iodide of potassium; the excretion of the phosphates by this channel is also considerably increased; and these salts yield an insoluble residue which contains the greater part of the eliminated lead.

3*d.* Although lead is not naturally eliminated by the saliva, the iodide of potassium seems capable of occasioning its discharge through this medium.

Malherbe gives the following rules for the rational treatment of lead poisoning, in which he has arranged the remedies according to their relative importance, and not in the order in which they should be administered, which must necessarily vary in different cases. The indications are:—

1*st.* To eliminate the lead contained in the economy by means of

iodide of potassium, which should be administered methodically, and should be given as long as the urine and the saliva give the reactions of the metal.

2*d*. To cleanse the cutaneous surface by means of sulphureous and soap and water baths; and to purify the mucous surfaces by the internal use of the preparations of sulphur and by purgatives. The latter medicines, by inducing abundant bilious evacuations, doubtless eliminate a part of the lead contained in the liver, but they cannot reach those portions of the metal which are combined with the tissues of other organs.

3*d*. To calm hyperæsthesia and nervous symptoms in general (as epilepsy, delirium, convulsions, coma), by narcotics, and especially by belladonna, which, in addition to its sedative properties, is possessed of a cathartic action which often renders the employment of purgatives unnecessary.

4*th*. To combat paralysis by means of strychnia and electricity.—*Gazette des Hopitaux.*

8. *The Recognition of Vegetable Poisons by the Microscope.* By Dr. FRAZER.

Considerable practical difficulties exist in the medical investigation of fatal instances of poisoning, and the detection of the deleterious substance which has been employed, even when it chances to be one of our well-known ordinary chemical agents which are most easily recognized, is a problem that requires considerable skill in the details of analytic chemistry, and often slow and tiresome operative manipulation; still, thanks to the present state of chemical knowledge, it is a question which may be solved by any one who exercises adequate care and enjoys an average extent of practical dexterity, and at the same time, with so much certainty, that its accomplishment removes the possibility of error, leaving not the shadow of a doubt on the mind as to the exact nature of the poison itself.

It is, however, a very different matter when vegetable poisons have been the source of mischief; owing their activity to varied proximate principles, many of which are as yet obscurely known and difficult to recognize, even when isolated, by the aid of chemical agents, they are almost completely beyond the reach of our recognition if absorbed into the system, and we are, under such circumstances, usually obliged to rest satisfied with whatever accidental information can be obtained from circumstantial evidence, or to confess that whilst negative results demonstrate the absence of chemical substances, our positive information extends no farther than of stating that some vegetable possessing dangerous properties, has been the cause of death.

Now we meet, although not very frequently, with instances of the latter form of poisoning, in which, usually as the result of accident, some of our ordinary indigenous plants have caused deleterious, and perhaps, fatal effects; such for instance, as the œnanthe crocata (which seems pre-eminently to deserve the rank of the most dangerous of our

native flora), or the other poisonous umbelliferæ; or of the solanaceæ, as belladonna, which appears to cause more frequent accidents in England than with us, probably from its greater abundance; or the ranunculaceæ, as aconite, etc.; and in all these, and similar poisons, our test tubes and reagents appear to be as yet almost powerless in detecting their presence. In such cases I would propose, that, aided by the history and symptoms, an aid of which we always avail ourselves in other forms of poisoning, the microscope be employed in their investigation; and the most certain way, I believe, to accomplish this result, especially for those not very intimately acquainted with the peculiar differential characters of the plants, is to compare whatever vegetable fragments may be ejected by vomiting during life, or found in the body after death, with some recent specimens of those vegetables which are most suspected to have been the cause of the accident. I have satisfied myself in this manner that the leaves, especially of aconite, henbane, foxglove, belladonna and several others of our indigenous poisonous plants, can be easily recognized, and that they present distinctive characters adequate to establish ample ground for their discrimination.

The point in such an investigation, which we require to determine in the first instance, is identically similar to the first step in deciding on the nature of a botanical specimen; if the specimen consists altogether of cellular tissue, it is to be classed as one of the "cellulares," and possibly may prove to be some of the poisonous fungi; should it, however, yield us distinct evidence of vascular tissue, thus demonstrating its more exalted place in the botanist's systematic arrangements, in that case we will have as our next duty, supposing it is a fragment of leaf which we are examining, to decide on the nature of the venation, which at once points out whether it constituted a portion of an exogenous or of an endogenous plant, the latter having the well-known parallel venation, and the former presenting an equalled distinctive reticulated arrangement. Having advanced so far, we then have four other points, at least, for aiding our further identification of its source.

1*st.* The presence or absence of hairs, their relative abundance on the upper or under surface of the leaf, and their shape, composition, and arrangement.

2*d.* The appearance of the epiderm on the upper surface of the leaf, the form of the cells of which it is composed, the existence or non-existence of stomata, and if they are present, their shape, size, and disposition in the epiderm.

3*d.* Similar observations on the epiderm upon the under surface of the leaf.

4*th.* The disposition of the parenchyma of the leaf, the development of various crystaline matter (raphides) in this tissue, and their form when they exist.

An agreement in these four points, with corresponding appearances in a recent specimen, would, I conceive, afford more than an equivalent to the degree of moral certainty which is now derived from a chemical analysis of a mineral poison, and I can readily understand, with the scientific aids now at our disposal, that just as the chemist is able to

place securely in a sealed tube, and exhibit before the court sublimates of arsenic and mercury as undoubted evidences of his analytic skill, so the microscopic observer might produce, to corroborate his testimony, accurate drawings of the fragments of a poisonous plant, printed by solar light, as photographs, or more slowly obtained with the aid of a pencil and camera. I have myself made, during my investigations on this subject, a number of rough sketches in the latter manner, of the appearances presented by several of our ordinary vegetable poisons, but they are so easily identified by the method I have attempted to describe that I need not dwell further upon them.—*Dublin Hospital Gazette.*

4. *Experiments with the Venom of the Toad.* By M. VULPIAN.

In his experiments with the *woorara* poison, M. Vulpian ascertained, that the mucous membrane of the alimentary canal of the batrachians does not enjoy the same immunity as that of the other vertebrata. The poison is rapidly absorbed, and the animal dies almost as speedily when the poison is introduced into the mouth or stomach, as when it is inserted under the skin. The venom of the common toad (the lactescent fluid contained in the cutaneous pustules) acts in a similar manner. In his experiments with this substance, he found, as MM. Gratiolet and Clo z had already done, that, when inserted in a subcutaneous wound, it kills dogs and guinea-pigs in a space of time varying from thirty to ninety minutes. A period of excitement is followed by one of prostration, and vomiting, or attempts to vomit. In the guinea-pig, death is ushered in by convulsions, but these are absent in the dog, who exhibits a kind of drunkenness for a minute or two before expiring. Frogs inoculated with the venom also perish in an hour or so; but the venom exerts no influence upon toads themselves.

Introduced into the stomach of dogs, no ill effect is produced by the venom; but frogs are invariably killed, whether it is introduced by the mouth or the skin, a somewhat longer period being required in the former case. On examining the stomach of frogs so killed, no trace of erosion or irritation is discernible, and even the paper in which the venom has been inclosed may be found untorn.

On examining animals killed by the venom, muscular irritability is found uninjured, and the sciatic nerves, when pricked or galvanized, manifest muscular contractions. The hearts of dogs, examined immediately after death, are found motionless; their cavities are filled with blood, the auricles and venæ cavæ being especially distended. The liver is much congested, and the lungs are exsanguineous. On pricking the walls of the heart, incomplete contractions can be excited. The effect of the poison on the heart is, however, best exhibited in the frog, an animal in which its pulsations, when in the normal condition, may pe prolonged for more than twenty four hours after death. When poisoned by the venom of the toad, the motions of the heart are observed to cease about ten minutes prior to death; and on opening the cavities, they are found filled with black blood, the action of the air exciting

some feeble contractions of the parietes. If the heart be not exposed until the animal is quite dead, no contraction is usually observed. The ventricle is then generally found contracted in itself, empty, and pale, while the auricles and venæ cavæ are distended with black blood. This arrest of the cardiac movements is not produced by the abolition of irritability, as we can usually excite contractions by means of galvanism. It is also probably the cause of the congestions of the nervous centres noticed by MM. Gratiolet and Cloez.—*Gazette Medicale*, 1855. No. 4.

PSYCHOLOGY AND LEGAL MEDICINE.

1. *The Case of Mrs. Ramsbotham.**

Among the universally admitted forms of mental aberration is one manifested only by an inordinate and uncontrollable desire on the part of the sufferer to appropriate to himself the property of others. This variety of insanity ranks in the same category with certain cases of homicidal mania. In both, the madman breaks the laws which are framed to enable men to live together in a social state, and consequently, in both, the magistrates whose duty it is to guard those laws from violation, are called on to take cognizance of his acts. No doubt, many of those who rid themselves of their own property in the most reckless manner, or destroy their own health by indulgence in the use of alcoholic liquors, are equally the subjects of mental aberration; but the offence being merely against the individual who commits the act, it is in exceptional cases only that the law is called on to interfere.

Cases of homicidal mania are by no means infrequent, in which, without provocation, or on the slightest provocation, the madman, although sane in his ordinary intercourse with men, slays perhaps his dearest friend, or cuts the throats of children whom but a little while before he would have saved from death at the expense of his own life. Cases, too, of undoubted mental aberration, manifested only by what in a sane person would be theft, are pretty common. In one well-known case the sufferer was a lady of wealth, and her servant accom-

* The victim of this unfortunate mental infirmity is the wife of the eminent author and obstetrician, whose name is so familiar to the American profession; and the difficulties which surround the legal point, as well as the psychological question which is involved, are so well discussed by the editor of the Medical Times and Gazette, that we give his remarks in full. A moral monomania, to which *any one* may be liable, however high in rank or pure in character, is well worthy of the thoughtful consideration of the profession.—Ed.

panied or followed her in all her walks, in order that she might enter every shop which her mistress left, to inform the owners that she would pay for any article the lady had appropriated without permission. The plea of insanity, however, in these cases, is very properly regarded with much suspicion by the public and the law. It is felt, were this plea readily admitted as an excuse for theft, that property would soon be unguarded by the law; that those who longed for their neighbours' goods, who desired to indulge in luxuries they could not command, would help themselves to the property of others, and when detected in their crime, would plead, as an excuse, an irresistible propensity to take what did not belong to them. Still, while the law is unwilling to admit in these cases the plea of insanity, justice is obliged to admit in other cases that the plea is a right one.

A gentleman, having command of an abundance of wealth, and wanting for no luxury, is so affected mentally that he takes every trifling ornament from the rooms, even of his nearest friends. So well known to his relatives is this passion, that at night his pockets are regularly searched, in order that every one may receive again those articles which really belong to him. Such a case is on record. Now, supposing this gentleman to enter a shop where his madness is unknown, he, morally innocent, would probably be cast into the cell of the felon. Difficult as it is to separate these cases from those in which the moral responsibility of the thief is altogether unimpaired, yet in many cases it can be done; and it behooves those whose duty it is to administer justice, to watch that they do not, on the one hand, readily admit the excuse, and, on the other hand, that they do not forget the fact that, in certain cases, these illegal and apparently immoral acts are the results simply of a disordered intellect. In the majority of these cases, the condition of the mind must be estimated by the want of motive for the committal of the offence.

The case of Mrs. Ramsbotham illustrates this point. Here a lady, possessed of every comfort that wealth could supply, enters a shop and purloins three or four pocket handkerchiefs, which, judging from their price and the account given of them by their owner, must have been almost entirely valueless to her. Surely the facts themselves are the strongest evidence that could be offered of the absence of moral guilt, because they afford the strongest evidence of mental aberration. With such *prima facie* evidence of weakened intellect, we regret that a lady so highly respected as Mrs. Ramsbotham, should have been placed, by what seems to us to be the ill-judged zeal to do right on the part of the prosecutor and of the magistrate, in a position which may cause irreparable damage to a mind affected, perhaps, by some transient cloud, and may convert a case of temporary moral monomania, into one of hopeless imbecility or confirmed melancholia.

It has been urged that if we are to judge of the sanity or insanity of the accused, by the relation between the offence and the temptation, we admit a mode of defence to the wealthy, from which the poor are excluded. To this the answer is manifest, viz: that because in a given case a particular mode of defence is impossible, we are not to prevent

those to whom such a mode of defence is possible from using it. As well might we say it was wrong for the man who possesses two legs to employ them in escaping from a danger, because a man with one leg is left behind to suffer from it; or that he who can swim should not exert his limbs to save his life, because another placed in the same circumstances is unable to strike out.

To have had one so near to him, afflicted as Mrs. Ramsbotham is, must have been a source of the most poignant grief to Dr. Ramsbotham, but if it be any consolation to him, and we think it must be, to know that he has the warmest and the truest sympathy of his professional brethren in this time of trouble, we feel confident that he must enjoy that consolation. We have witnessed the exhibition of but one sentiment, viz: that of deep sympathy with Dr. Ramsbotham; we have heard but one opinion in the profession, viz: that Mrs. Ramsbotham is free from all moral guilt.

Since the above remarks were written, the trial of this unfortunate lady has been concluded, by the dismissal of the jury without coming to a verdict. The punishment already inflicted has been indeed terrific; but we have very little doubt that those who have reflected upon the mysterious operations of the human mind, as affected by health and disease, will agree with us in the views which we have expressed, and will rejoice that, by a termination satisfactory to all parties, and discreditable to none, this unhappy trial will now cease to occupy the public mind. The psychological question, however, still remains for discussion; but the parties competent to discuss it are not the persons who form our common juries.

2. *On Goitre and Cretinism.* By MM. MOREL and MENESTREL.

Dr. Morel, chief physician to the lunatic asylum of Maréville, looks upon cretinism as a degeneration of the species due to a special action, exerted by an *intoxicating principle*, or deleterious miasma, upon the cerebro-spinal system, either through the medium of the air respired, or through that of the substances taken into the economy, and which is especially found existing in connection with soils in which the magnesian limestone predominates, although it cannot be absolutely affirmed that it is never found in connection with other geological formations. He has just published some most elaborate and interesting papers on the subject of cretinism and goitre in the *Annales Psychologiques*, and in the last one he prints a letter from Dr. Menestrel, Mayor of Sérécourt, which contains some very interesting matters relative to the prophylaxis of these diseases in goitrous localities. Sérécourt is a village, near the small town of Darney, in the department of Vosges, between Haute-Saône and Haute-Marne. Dr. Menestrel says, that although it has never seemed to him fully proved that the use of water, impregnated with the salts of lime and magnesia, and containing no traces of iodine and bromine, could alone induce goitre; he has always felt quite convinced that the dolomitic salts exercised a special

morbid action upon the thyroid gland, by causing hypertrophy of its structure. And he is of opinion that this deleterious action can be neutralised by means of the solvent properties of iodine, when the water used for drinking contains a small quantity of this metalloid. He also believes that continued atmospheric humidity, want of sufficient isolation, insalubrity of the dwelling-houses, and neglect of the laws of general public hygiène, are the causes which, in connection with the bad quality of the drinking waters, *necessarily give rise to goître*, and render it endemic.

In Sérécourt there are 164 goîtrous persons out of 736 inhabitants, that is 22 per cent. Of these 143 are females, whose sedentary lives, in unhealthy dwelling-houses, predisposed them to the disease. Sérécourt contains only one principal street, running from east to west, so that one half of the houses are exposed to the north, and the other half to the south. Of the 164 cases of goître in the village, 105 were in houses exposed to the north, and 59 only in those fronting the south; facts which are very significant.

Dr. Menestrel has solicited the assistance of the state to enable him to carry out a series of experiments, on a large scale, on the whole members of the community, by making them use common salt, slightly impregnated with iodine; and he wishes to be authorized to place, in all the public wells, a small quantity of iodine, enclosed with a capsule of iron, constructed so as to allow of the water becoming slightly impregnated with that mineral. He anticipates immense benefit from these prophylactic measures.—*Annales Medico-Psychologiques.*

3. *On the Histology of the Blood in the Insane.* By Dr. LINDSAY.

The author founds his remarks on the result of a microscopical examination of the blood in 236 insane patients in the Crichton Royal Institution, and Southern Counties Asylum at Dumfries, and carefully compared with blood taken from thirty-six officers and attendants of these institutions. The blood examined was invariably taken from the fingers by the prick of a needle.

Dr. Lindsay found sometimes, great difficulty in getting the consent of these unfortunates to his experiments. Many seemed to think that some conspiracy against their lives was lurking under the operation; some declined being made subjects of experiment or amusement, whilst others declared that in their debilitated condition the abstraction of one drop of blood would be inevitably fatal. There was much less resistance amongst the educated classes, than with the rough and hardy artizan and field laborer, whilst the female patients were always more eager for the experiment than the other sex, which our author attributes to the greater curiosity on the part of the ladies to find out what was to be done.

The following is a *resumé* of the chief general conclusions or results drawn by Dr. Lindsay from his observations:—

1. That the blood of the insane varies considerably in—*a.* colour, granularity, and dullness; *b.* density or consistence; *c.* coagulability;

d. relative proportion of serum, fibrin, and globules; *e.* the tendency of the red discs to agglomerate; *f.* rapidity, readiness, and amount of the flow.

2. That the *red discs* vary in *a.* size, *b.* form, *c.* colour, *d.* number, *e.* tendency to agglomerate.

3. That the *white globules* vary in *a.* size, *b.* form, *c.* granularity, *d.* number, *e.* reaction of acetic acid.

4. That, in the blood of the insane, a *leucocythemic condition* frequently exists.

5. That, in many cases, this condition may be more apparent than real, and due to a *deficiency in the amount of red discs.*

6. That there is no fixed relation between the kind or intensity of the above conditions, and the various forms or phases of mental alienation.

7. That there is, however, a certain relation between these conditions and the physical complications of mental alienation.

8. That these conditions are not peculiar to the insane, but occur in the sane, under similar circumstances of physical disease.

9. That the blood is more altered in the insane than the sane, chiefly in proportion as anæmia, struma, and other physical states, are more common in them.

10. That, contrasting the condition of the blood in the rich insane, with that in the poor insane, it is deteriorated more frequently and to a much greater extent than the former.

11. That this is due, in great measure, to the essential difference in the education and habits in the respective classes; to the predominance of mental over physical culture in the higher classes; and to the predominance of physical over mental exercise in the labouring classes.

12. That, contrasting the condition of the blood in various forms of mental alienation, no alterations can be considered peculiar to, or frequent in, any one of these forms.

13. That, contrasting the blood of the insane with that of the sane, any structural alteration in either class is usually due to physical disease.

14. That the physical conditions or diseases, both in sane and insane, in which the above structural alterations most frequently occur, are debilitated states of the system and general vitiation of the blood, resulting from long-continued and exhausting diseases, *e.g.*, anæmia resulting from phthisis, menorrhagia, or intestinal diseases.—*Psychological Jour.*

4. *The Value of the Coroner's Court.**

Englishmen are eminently conservative. Most old institutions effect some good; and, fearful lest the good that pertains to them should

* The remarks taken from our English Cotemporary of which we give a brief abstract, are well worth the serious attention of the public. A coroner's inquest in our country is oftentimes a mere farce, and an investigation which may require the most profound display of scientific information, together with a delicacy of manipulation and accuracy of experiment only to be acquired by constant practice, is with us gen-

be lost, we keep them with all their faults. The Coroner's Court is one of these Institutions,—one that ought long since to have been replaced by a less cumbersome and more efficient tribunal. The disgraceful scene that took place in the Court of the Middlesex Hospital, between that respectable representative of Bumbledom as the *Times* styles our Middlesex Coroner, and a Police Inspector, in their contest for the custody of the man Baranelli, will doubtless lead to a review, by competent authorities, of the whole subject of Coroners' Courts; and we trust to an assimilation of the English law to the far better law of Scotland in reference to inquiries into the cause of death.

We are anxious to draw the attention of those who may have to deal with the matter to the importance of appointing in every District a Medical man competent to conduct the investigations that are now confided to the members of the Profession indiscriminately. In the majority of the cases which are brought before the Coroner, the Medical testimony is of the highest importance. The value of the testimony must, however, depend on the competency of the witness to give evidence on the points touching which he is examined. The Medical witness has to make a *post-mortem* examination of the deceased, in many cases an analysis of the contents of the stomach, perhaps of some of the viscera, and, it may be, even of the soil around the spot on which the body has rested, supposing it to have been interred for some time. Is it possible for a man engaged in the laborious and practical duties of his profession to be qualified to determine the points in question with reference to these subjects? It is not. In many large districts of England, the deepest prejudices exist against the examination of the dead; while the Practitioner has little time at his disposal for conducting such examinations. Now and then an interesting or obscure case may tempt him to urge on the friends the propriety of overcoming their prejudices; and in a few of these few cases he may succeed. But can the knowledge thus gained be considered sufficient to qualify a man to determine the delicate and important questions that he must answer before a Jury can find a verdict? And if this be true with reference to *post-mortem* examinations, *à fortiori* is it true with reference to chemical analysis. Nine tenths of those fresh from the schools would be sadly puzzled when called on to prove the presence of even a large quantity of opium in a complex fluid. What, then, must be the case with men who, busily employed in the important duty of treating disease, have necessarily allowed years to elapse since they had a crucible or test-tube in their hand, save for the purpose of determining the presence of sugar or albumen in the urine?

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erally under the direction of a coroner, who holds his office as the reward for political services, or as a mark of personal friendship. A record of the decisions of our coroner's court for the past ten years, would develope an amount of ignorance so astounding, as would convince the most casual observer that a searching reform is necessary.—Ed.

THERAPEUTICAL RECORD.

Alopæcia Circumscripta.—Mr. Startin, of London, has been lately treating local baldness in a novel way. He first brushes over the spot with a solution of argent. nitr. (℈ij. ad ℥j.), which is followed, while moist, by one of the hydro sulph. of ammonia. A black sulphuret of silver is thus formed, which dyes the skin for a week or more. Whilst this application is evidently an irritant, it is more pleasant than the blistering fluid, cantharidine ointment and such remedies. At the same time the bald spot shows less when stained black, being nearer the color of the hair.

Bronchitis—Chronic.—The use of hydrochlorate of ammonia, in doses of fifteen or twenty grains, is highly spoken of by Dr. Delvaux (*Presse Med. Belge*) as a remedial agent in the treatment of chronic bronchitis. He precedes its administration with a purgative, and enjoins a strict diet during its continuance. Dr. Delvaux alleges that the cough will lessen and the dyspnœa become less, whilst the appetite improves. It causes an increased flow of urine, and also an augmentation of the cutaneous transpiration.

Dysentery.—The sedative influence of creosote has been appealed to by Dr. Wilmot, in the treatment of dysentery, with good results. He recommends this remedy as an enema of one drachm to twelve ounces of starch, and if we are to rely on his statements, there is something valuable in his suggestions.

Enuresis.—It is very well to have at hand various formulæ for this troublesome affection in children; and we select the following, which we owe to the Gazette de Hopitaux:

Dr. Blaschka, of Freyenwalde, uses equal parts of *tinct. nucis vomica and tinct. ferri acet.*, of which 10 or 15 drops should be taken twice each evening.

Dr. Huber, of Zurich, recommends *ext. nucis vom.* 1 *part*, *oxyd. ferr. niger.* 48 *parts*, giving two grains night and morning.

Dr. Naegle gives one grain of *tannin* night and morning.

Ganglion.—To break what is commonly called a ganglion, and thus disperse the tumour which is often disfiguring to the wrist, and about which we are often consulted, it is only necessary to flex the wrist so as to make the skin tense; then let the surgeon seize the hand with both of his and place both the thumbs, one above the other, on the ganglion. It is rarely that such pressure does not succeed in its

object, whereas the usual way of placing the thumbs side by side, by the law of the diffusion of presence in fluids, the two counteract each other, and there is great loss of force.

Glandular Enlargements.—An ointment of black oxide of copper is thought of great value by Prof. Hoppe, of Basle, (*Deutshe Klinik*) to discuss the various forms of glandular enlargements, so often occurring in practice. He has specially tested its virtues in indurations of the neck and of the salivary glands, goitres, and mammary enlargements. Prof. Hoppe believes that it would be equally applicable in orchitis, swelling of the groin, and in hypertrophied liver and spleen. It is prepared in the proportion of fifteen to thirty grains to the ounce of lard, and the parts to which it is applied should be covered with a bandage.

Hemorrhoids.—Guy's Hospital gives us the following ointment for piles, which happily combines the astringent properties of lead and galls, with the anodyne influence of opium. A good formula of this sort will be useful to the country practitioner, who will frequently be consulted with regard to this very common disease: ℞. *Gallarum contrit.*, ʒij.; *Opii* (*emolliti aquæ cum*, ʒj.) ʒss.; *Liq. plumbi. diacet.*, ʒij.; *Adipis*, ℥j. *ft. ung.*

Hydrocele.—Prof. Langenbeck, of Berlin, not being satisfied with the effects of the iodine tincture as an injection in hydrocele, has recently been employing chloroform as a substitute, with the happiest results. He finds that it produces adhesive inflammation more quickly and more surely than the old remedy. After withdrawing the fluid of hydrocele, he injects about one drachm of chloroform, which remains for a short time, and then is allowed to escape. Langenbeck, in the *Deutsche Klinic*, reports four cases treated thus, which were radically cured in two or three weeks.

Porrigo.—This obstinate affection, often met with on the scalp in children, is attacked at Guy's Hospital with a prescription styled *Unguentum Metallorum*, and prepared by mixing equal parts of zinc ointment, of the dilute nitrate of mercury, and of the cerate of acetate of lead. It has been very efficacious in porrigo, impetigo, and even in favus.

Scarlatina.—Sixty cases of scarlet fever, treated by Dr. Day, of Stafford, England, with nitric acid in full doses, has satisfied that gentleman that he has discovered an important remedy, and he reports his practice in a late number of the Medical Times and Gazette. There is but little difference in his idea of administering the nitric acid, which he uses also to the throat as a gargle, and the old prescription of Fothergill, which he used to say "would pickle their juices,"—the muriatic acid diluted and sweetened with honey, which was employed internally and as a mouth wash. Others prefer lemonade draughts freely administered, which seems to have the same antiseptic virtue, and besides tend to the kidneys and skin. Dr. Day gives the nitric acid in larger

doses than we are in the habit of doing, and in this consists his only claim to originality.

Skin Diseases.—The active principle of hemlock is an oleaginous fluid called *conein*, and a Russian physician of some note, M. Murawjeff, has found it efficacious, as an external application, in many of the obstinate diseases of the skin. It allays the irritation and favours the cure. It is very valuable in toothache, one drop being sufficient to control the pain. Murawjeff, also, has tried it with advantage in neuralgic and syphilitic pains of the bones, and lastly, as a palliative in scrofulous and cancerous ulcer. Conein should be applied to the skin as an ointment, in the proportion of twelve drops to one ounce of cold cream. In neuralgia, Murawjeff washes the part with spirits of wine, and applies two drops of pure conein, covering with oiled silk. One drop to two ounces of water forms a colyrium of great power; and as an enema, two or three drops may be administered in starch emulsion. *Med. Zeitung Russ.*

Spermatorrhœa.—Professor Trousseau believes spermatorrhœa to depend upon a spasmodic condition of the vesiculæ seminales, somewhat analogous to the condition of the bladder in enuresis. He therefore proposes the use of belladonna, both internally, and applied as an ointment to the perineum nightly, and if necessary he advises a suppository of the extract of belladonna in the rectum. M. Trousseau declares that oftentimes an erotic feeling is conjoined to this spasm of the vesiculæ seminales, and suggests the use of bags of hot sand applied to the perineum at night. The use of the bromide of potass, in doses of from 15 grs. to ʒss., as recommended by Thielman, will be found to have a decided anaphrodisiac effect.

Syphilis—Secondary.—M. Desmartis, of Bordeaux, declares that after a careful comparison of the effects produced by the different preparations of mercury, he has come to the conclusion that the cyanuret of mercury is of superior value, more especially in syphilis. He states that it never irritates or salivates, and where all the preparations of that metal had failed to produce benefit, that the cyanuret would restore to health, patients whose condition had seemed hopeless. M. Desmartis has also used it beneficially in iritis and syphilitic ulcerations of the nose and fauces.

BIBLIOGRAPHICAL RECORD.

I. *The Principles and Practice of Obstetric Medicine and Surgery in Reference to the Process of Parturition.* By FRANCIS H. RAMSBOTHAM, M. D. A new American edition, revised by the author, with notes and additions. By WILLIAM V. KEATING, M. D. Philadelphia: 1855. Blanchard & Lea. (From A. Morris.)

How superior in intellectual acquirements and mental endowments, ought the present generation to be, in comparison with those who have preceded them. What ugly chasms over which the unfortunate student fifty years ago was compelled to plunge, are now filled up; what inaccessible mountains stood in his way and impeded his onward progress, which now are levelled in the dust. See that hard and cross-looking alphabet which taught us our letters, and compare it with the delicately tinted and poetically arranged card of our children; see the panorama of the world spread before us and geography taught by the pictorial method, whilst illustrated histories and "Parley's travels" have long ago driven Hume and Robertson out of the schoolroom.

This "learning made easy" has found its way into medicine, and if the incessant outcry which "the reformers" keep up against the modern school of medicine has any truth in it, we do not see what excuse it can plead. The facilities for mastering the study have quadrupled since the present generation entered the field; the advantages of lectures, of books and of clinical studies are incomparably greater, and when we see the student of the present day eagerly seizing upon these precious privileges, when edition after edition of expensive books are eagerly purchased and read, when every vacancy in a hospital or infirmary has its dozen applicants, we hesitate to give our assent to the charge so often made upon the young profession. Although there are errors which need a remedy, and abuses which should be rectified, yet we doubt whether the profession as a class is not steadily rising in the scale of excellence, and surely though slowly reforming itself.

These thoughts having been suggested by an examination of the late American edition of Dr. Ramsbotham's work on obstetrics and a comparison of it with some of the standard works of the old school; for instance "James's Burns," or "Denman." Succinct and compact as is the style of those old books, correct in their practical teachings as the circumstances of the case would permit, yet how can they compare with this work of Dr. Ramsbotham. With this in his hand, the country student in his quiet home, has displayed before

him at a glance, the accumulated experience of father and son for nearly fifty years. As an epitome of English obstetrics, this book is without a rival and deserves our highest praise, whilst the illustrations and diagrams enable the student who is deprived of clinical advantages, to understand and appreciate the whole philosophy of parturition.

The new addition has large amendments and alterations, besides a graceful preface by its author, who dedicates his work to Prof. Meigs. Dr. Keating has made some additions from American midwifery which are not without merit. The general appearance of the whole book is much improved, and is worthy of a favorable reception at the hands of the profession.

II. *Practical Treatise on Foreign Bodies in the Air Passages.* By S. D. Gross, M. D., Professor of Surgery in the University of Louisville, Member of the American Philosophical Society, Author of "Elements of Pathological Anatomy," "A Treatise on Diseases of the Urinary Organs," etc., etc. With illustrations. Philadelphia. Blanchard & Lea. 1854.

This book treats of an accident which is liable to occur in the practice of even the most remote of our readers; and which, when it does occur, constitutes one of those formidable affairs, requiring not only prompt, but most intelligent action. Viewed in these two aspects there is no subject of more importance to the every day practitioner. Dr. Gross in taking it up has conferred a great benefit on the profession. He has filled in the most thorough and able manner, an hiatus in our literature, of the existence of which he did not himself appear to be fully aware until he began the investigation. For he tells us, in his preface, that the subject was brought under his investigation for the purpose of contributing a short monograph to a journal, but that he found as he proceeded it was possessed of interest and importance to a sufficient degree to entitle it to the position of a separate publication.

The treatise, we need hardly say, when we bear in mind the character of the author—so well displayed by the accuracy and thoroughness of former publications,—covers the whole ground involved in the inquiry, and is therefore obliged to become a standard work.

If we considered it a less important production, we should here go into an analysis of its contents, so as to furnish our readers with its points of interest, in order that they might know them, and yet dispense with the purchase of the book in cases where this might be onerous, without suffering a loss to themselves.

This editorial privilege we feel bound to forego in the present instance, in consequence of the importance of the work, and we most earnestly urge it upon all practitioners, that they should possess a copy.

III. *A Practical Treatise on the Diseases of Women.* Illustrated by cases. By SAMUEL ASHWELL, M. D. Third American from the third London edition. Philadelphia: 1855. Blanchard & Lea. (From A. Morris.)

"A practical treatise on the diseases peculiar to women," a book of more than five hundred pages, and not a word which could be spared; how sad the thought, that the "weaker sex" has this additional load of disease and suffering resting on them; what a motive to lead the medical man to devote his time and best talent to the study and investigation of these special maladies.

This is the third reprint of Dr. Ashwell's book, in this country, from the third English edition, in ten years. Our praise can hardly be worth much after such a forcible mark of approbation at the hands of the medical public, yet as it is the first opportunity that we have had to notice a work which has long been a favorite, we may be pardoned for inflicting on our tired reader, an unnecessary criticism.

Dr. Ashwell writes from the bedside and for the bedside. His whole work bears all the marks of freshness and originality; not that he has developed any novel theories or invented any extraordinary prescriptions—but the disease is painted from the living subject, and sketched with the hand of a master.

There are no illustrations to the work, no pictures or showy lithographs, but the best of all illustrations, *notes of cases* exemplifying the various types of disease treated of. The reader will find these groups of cases, the most instructive portion of the book, collected as they have been for many years and from many sources. The tables of formulæ which accompany each classification of disease will be very useful as a reference, to those whose time or opportunity does not enable them to prepare these things for themselves.

EDITORIAL AND MISCELLANEOUS.

A TOAST.*

BY OLIVER WENDELL HOLMES, M. D.,

A triple health to Friendship, Science, Art,
From heads and hands that own a common heart!
Each in its turn the others' willing slave;
Each in its season strong to heal and save.

Friendship's blind service, in the hour of need,
Wipes the pale face—and lets the victim bleed.
Science must stop to reason and explain;
ART claps his finger on the streaming vein.

But Art's brief memory fails the hand at last;
Then SCIENCE lifts the flambeau of the past.
When both their equal impotence deplore,—
When Learning sighs, and Skill can do no more,
The tear of FRIENDSHIP pours its heavenly balm,
And soothes the pang no anodyne may calm!

MAY 1st, 1855.

The American Medical Association.

We call the reader's attention to the sketch of the proceedings of the American Medical Association, at its late meeting in Philadelphia,

* The above charming little composition, from the pen of the versatile Holmes, was prepared by him to be read at the supper of the Association in Philadelphia. That expensive and very inappropriate ceremonial having been dispensed with at the late meeting, we seize the earliest opportunity of giving publicity to Dr. Holmes' beautiful lines.—ED.

which we report as fully as the space allotted us in the present number would permit.

It is gratifying to record that the interests both social and scientific of the society remain undiminished.

With regard to the former, our Philadelphia friends spared no exertion, making the meeting an agreeable combination of sight seeing and entertainments, with the more solid duties of the society. The members in attendance, we are sure returned to their homes with grateful recollections of the universal hospitality which was extended to them, and we venture that hereafter, there will be but little difficulty in carrying the question, should that city be again proposed as the place of meeting.

In regard to the session, the utmost harmony prevailed throughout; and while its general programme was not different from former meetings, we believe the scientific proceedings were of superior interest. The reports of committees which were offered were able and satisfactory, and we here take occasion to say to the members of the association in this region, that in view of the great value of the forthcoming volume of Transactions, if not for other reasons, no time should be lost in remitting their assessments, in order that a copy of the book may be secured.

We would like to see a more general interest manifested, in this effort to organize the profession of the country.

Deprived of all hope of aid through other channels, it is conceded now by the best minds, that it is through such a measure only that we have a right to expect protection and influence.

Efforts steadily directed towards the attainment of this end, therefore, should challenge the co-operation of every one, since, for reasons which must be obvious, the interest of even the remotest practitioner is deeply involved in the result.

There are those who disbelieve in its ability ever to attain these ends, and are disposed to cavil because more efficient action has not been taken with regard to medical education. The subject was barely introduced in its late deliberations. Indeed a sort of antagonism between it and the schools, somewhat indicated in its earlier sessions, appears to have subsided. It will be seen that at its late meeting, three out of four of its chief officers were selected from the professors of colleges. So far from complaining of this, we believe it argues well for the society. This body has done what it could do upon this question; it has published to the world its views upon the subject, and the requirements,

which it deems essential to constitute the proper standard for graduation, and when the schools come in and join in its action, they tacitly bind themselves into an acquiescence of these measures, and stand pledged to promote their enforcement. It is true neither party have as yet adopted stringent means, but both have had good reasons for it. The thing, we need not say, is wholly impracticable in the present state of things, and it has been the part of wisdom not to go farther. The prince must himself be firmly seated on his throne before he can coerce the enforcement of laws requiring radical changes and onerous innovations, in long established usages. Let the society thus aided push forward under the standard it has erected, let it complete its plan of a general organization of the profession, and none we believe ought to doubt, that in time it will have power enough to control the whole matter.

But this is not the only hope we have to see a better state of things brought about with regard to medical education. The elements, we believe, are already at work, which sooner or later must lead the very evils now so much complained of, to their own correction. The schools are charged with furnishing defective courses, and with graduating the student at the completion of a period of study, which is too limited for him possibly to acquire all which is demanded by the advances of modern science. Nevertheless men, who by patient study, either at home or abroad, have acquired the necessary perfection with regard to such matters, are now scattered throughout the country. When these two classes meet, therefore, a new umpire comes into the field. Any one who has paid attention to the subject, cannot have remained unobservant of the fact, that the people, slow always to observe in medical matters, are now beginning to discriminate between medical men. They do it too, easily, and by data more conclusive than heretofore to the understanding. The public are no longer satisfied by wise looks and vague allusions. Such a thing as accuracy of diagnosis, and generally an unerring prognosis in most diseases, they have learnt to be possible, and now are, every where, beginning to demand it.

We conceive this to be a great triumph of our art, and one which is to be fostered with care. It is destined to correct many abuses which now tend to humiliate the profession.

The work may be slow, but we believe it will gradually progress, and in time constitute one means of much power in promoting reform and advance in medical education.

The unsuccess of their pupils before the people, will drive the schools, in mere self-defence, to adopt a more thorough and complete course of instruction; for the student must have due preparation, and if they do not furnish it, he will get it elsewhere, either outside of the colleges or abroad.

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*American Medical Association. Proceedings of the Eighth Annual Meeting, held in Philadelphia, Pa., May 1 to 4, 1855.**

On the morning of Tuesday, May 1st, at 11 o'clock, the Association assembled in the spacious hall of the Musical Fund building, and at 11½ A. M. was called to order by the President, Dr. C. A. Pope, of St. Louis, the Vice Presidents taking their seats on either hand of the President. The ex-Presidents were invited to take seats on the platform.

Drs. E. S. Lemoine, of Mo., and Francis West, of Pa., took their seats as Secretaries.

Dr. Isaac Hays, of Philadelphia, chairman of the Committee of Arrangements, on behalf of the Profession of Philadelphia, extended a cordial greeting to the members of the Association.

The roll was called next; which, as reported in our last, indicated a representation from most of the states in the Union, the Army and Navy, and the Medical Society of Paris.

On the first day 337 had registered their names, but before the close of the Association the total number amounted to 510.

The following gentlemen were delegates from Virginia:—P. Trent, J. L. Dorset, C. B. Gibson, B. R. Wellford, D. H. Tucker, H. H. McGuire, Jas. Lyle, J. L. Cabell, B. W. Allen, J. W. Smith, J. F. Peebles, T. C. Spencer, P. C. Gooch, J. G. Cabell, P. F. Brown, Wm. B. Cochran, J. M. Hurt, A. S. Dillon—18.

The President, Dr. Chas. A. Pope, being called upon, delivered the annual address, an able production, containing the following important suggestions:

> Let all the contributions be read and attentively considered. Such a course would certainly be more encouraging, as well as more respectful, to their authors. Let the reports be deliberately and fully discussed, and let them go forth to the world with the sanction or criticisms of the Association. This would require time, it is true, but if we have time to meet at all, surely a few days would make but little difference. The good that would be effected would yield a tenfold compensation for the time employed. Every one must admit that three or four days is too short a time for the Association rightly to fulfil its annual mission.

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* The general interest which is exhibited by the profession, in the success of the American Medical Association, leads us to yield much of our space to the report of their proceedings, at the late meeting in Philadelphia. The proof sheets of the New Jersey Medical Reporter, which have been kindly forwarded to us by the editor of that journal, furnish us with an accurate sketch of the transactions, from which we have prepared quite a full synopsis.—Ed.

I would, moreover, respectfully suggest that time be taken for the discussion of some of the leading topics of medical philosophy. Amongst these may be mentioned the nature, causes, and treatment of chronic, protean forms of constitutional disease, and the laws of health affecting masses of men. Questions of mortality among children—the chemical and vital deficiencies of [illegible]. Questions like these, intimately connected with the welfare of the whole community, require for their successful investigation, and a degree of attention and thought which would not fail to clear away much of the darkness and doubt in which they are yet shrouded. Nothing so sharpens the intellectual powers as public debate. It fixes attention, and strains to the utmost every faculty. I have no hesitation in saying that facts enough have been accumulated to establish great and essential principles, of which the medical world is yet in ignorance or doubt. Nothing would contribute more to demonstrate these principles than the collision of well-tutured intellects in public debate. What a mass of facts, and statistical and demonstration would be brought to bear, on any of the subjects alluded to, if some of the best minds in the profession were to debate them, after a year's preparation! Observed facts are the crude materials of science: the intellect is the master builder of its august temple.

I make these suggestions for your consideration. All the scientific meetings in this country and in Europe, employ more time than ours has hitherto employed. Evidently we must protract our sessions, if we would render them as serviceable to science as they may be. No member of the Association will be required to remain longer than suits his wishes or convenience. Some fifty or sixty, more or less, would always be found to listen with eagerness to scientific papers, and engage with pleasure in scientific discussions.

The time has probably arrived, for a change in our plan of organization, which will admit of the selection of a permanent place for the future meetings of the Association. There are evident advantages incident to both the migratory and stationary plans. These might, perhaps, be easily reconciled and secured. A proposition, if I mistake not, was made some years ago, by the Smithsonian Institution, and I would respectfully suggest, whether it would not be in accordance with the best interests of the Association, to hold biennial meetings in Washington, and the alternate ones, as now, at different points of our common country. We might thus secure all the advantages of a fixed abode, in the way of preserving the archives, making collections, etc.; whilst by meeting in various localities, we could not fail to excite that wide spread interest among the profession, and obtain such accessions of new members as would greatly enhance the high and useful objects of our Association. Should this proposal meet with your approbation, I would further intimate that policy would perhaps require the meetings of the Association at the National Capital to be held in the years of the short sessions of Congress.

On motion of *Dr. J. B. Biddle*,

Resolved, that the thanks of the Association are unanimously tendered to the President, for the able and eloquent address just delivered, which they hope may be obtained for publication.

Dr. Hays stated that in accordance with the practice of the Association, the Arrangements [illegible] for the [illegible] from [illegible] was agreed to.

[illegible] of letters [illegible] from various individuals and societies [illegible], whose letters were referred to such committees as were indicated by the communications from each.

A proposition to [illegible] was made by [illegible] which was referred to the Committee on Publication.

the Medical Profession of Detroit, Chicago, and Nashville, which were referred to the Committee of Nominations.

The next business in order was the reading of the annual reports of the Standing committees.

The Committee on Prize Essays reported through Dr. Réné La Roche. The committee had received six essays in competition for the prize offered by the Association. But, although these essays evinced much ability and extensive learning, but one was decided to possess those qualities, which deserved the award of the prize. It was entitled "STATISTICS OF PLACENTA PRÆVIA." The name of the author was announced as Dr. James D. Trask, of White Plains, Westchester County, N. Y. Referred to Committee on Publication.

Dr. Thos. Reyburn, chairman of Committee on Epidemics of Missouri, Illinois, Iowa, and Wisconsin, read an abstract of the report submitted, which was, on motion, referred to the Committee on Publication.

At this stage of the proceedings, Dr. White, on behalf of the committee to whom was referred the resolution and amendments respecting permanent membership, submitted a report, recommending the adoption of the following resolution:—

Resolved, That no permanent member who is not present at an annual meeting of this Association, shall be required to pay the usual assessment; but no such permanent member shall be entitled to receive a copy of the printed proceedings of the meeting, unless by paying a sum equal to that assessed upon those who were present at such meeting; and that all the names of permanent members that have been left off the published list, be re-inserted in the next volume of *Transactions*.

Resolved, That no assessment whatever shall be made against members by invitation, but that they also be entitled to a copy of the printed *Transactions* by paying the sum assessed upon delegates in attendance.

The report of the committee was accepted and the resolution was adopted.

At 4 o'clock P. M., the members visited, according to invitation, the Pennsylvania Hospital for the Insane, and in the evening they were received at the houses of Drs. Hodge, Norris, and Bache.

MAY 2D.—MORNING SESSION.

The Association reassembled at 9 o'clock A. M. The minutes of the preceding day were read and approved.

Dr. Jno. L. Atlee, of Lancaster, Pa., asked and received permission to make a statement from the committee appointed by the annual meeting held at Richmond, to procure a suitable stone for the Association to contribute to the Washington Monument. An assessment of $1 had been made, upon each member, to purchase the stone and pay for the sculpture. The latter was executed by a young man named JOHN AUGUSTUS BECK. The design was suggested by the late Dr. Pierson, of Salem, Mass., but before he could consummate the plan, the fearful Norwalk calamity swept him from our midst. The drawing was made by his daughter, Miss Abby L. Pierson. The design, cut in alto relievo, on the face of a slab of Vermont marble, is a representation of Hippocrates, when refusing the bribes offered by the King of Persia to visit the Court of that prince, and give medical aid to the plague-ridden subjects of his empire—he indignantly exclaims: "Tell your master that I am rich enough; that honor will not allow me

to succor the enemies of Greece." Eminent artists, who have examined the stone, consider that no sculptor in America could have performed the work so well. Mr. Beck has been encouraged to pursue his study in Italy, and it is probable that he will rank among the finest sculptors of his age.

Dr. Atlee appealed to the members to come forward and make up a handsome compensation for the young artist.

A resolution was offered, to the effect that no member should speak unless his name and residence were announced. Adopted.

The Chairman of the Committee on Nominations recommended the following officers for the ensuing year:—

President—GEO. B. WOOD, of Pennsylvania.

Vice-Presidents—WM. M. BOLING, of Alabama; DANIEL TILDEN, of Ohio; D. HUMPHREY STORER, of Massachusetts: GRAFTON TYLER, of the District of Columbia.

Secretaries—FRANCIS WEST, of Pennsylvania; R. C. FOSTER, of Tennessee.

Treasurer—CASPAR WISTER, of Pennsylvania.

Committee on Publications—FRANCIS G. SMITH, of Pennsylvania, Chairman; FRANCIS WEST, of do.; R. C. FOSTER, of Tennessee; SAMUEL L HOLLINGSWORTH, of Pennsylvania; H. S. ASKEW, of Delaware; SAMUEL LEWIS, of Pennsylvania.

The committee also recommended Nashville, Tennessee, (but not unanimously) as the next place for holding the annual meeting.

The officers recommended were, on motion, approved by the Association.

The newly elected officers were conducted to their seats, by an appointed committee of five—Drs. J. M. Smith, of N. Y., Homans, of Boston, Blackburne, of Ky., Rouse, of Illinois, and Frost, of S. C.

Dr. Wood, on taking the chair, said he was deeply sensible of the honor conferred by the appointment, and none the less from an impression that it was probably an exhibition for the place where the Association was holding its meeting. Personally, he had a deep sympathy with the purposes for the advancement of which the Medical Association was established. He had devoted his past life to the advancement of these objects, and he would devote to the same the little that might remain. He was unaccustomed to presiding over such large assemblies, but he would endeavour to justify the appointment.

On motion, the thanks of the association were tendered to the retiring President, Dr. Charles A. Pope, of Missouri, for the able and impartial manner in which he had presided over its meetings.

The second part of the committee's report, advising Nashville as the place of holding the next convention, was taken under consideration.

A member moved that the next meeting be held at Washington, D. C.

Dr. Palmer offered an amendment that Detroit be substituted for Washington.

A member said that it would be impossible for the members of the Association to be accommodated in Washington, during a long session of Congress.

A member said that Nashville could be reached by railroad from the South, also by most splendid packets, that ply on the Ohio to the Cumberland river.

The motion relating to Washington was laid on the table.

Dr. Palmer, of Chicago, urged that the Association hold it next meeting at Detroit, and moved, in lieu of the report of the Committee, "that the next meeting be held at Detroit."

A motion was made that the whole subject be referred to a committee of five. Laid on the table.

The vote was taken on the motion of Dr. Palmer, "that the next meeting be held at Detroit," and it was agreed to by a large majority.—[Much applause.]

Dr. Foster, the newly-elected Secretary, tendered his resignation, which was accepted.

Dr. Brodie, of Michigan, was nominated for the office, and elected by acclamation.

Dr. Hunt, of Buffalo, read an abstract of his report on the Hygrometrical State of the Atmosphere in various localities, and its influence on Health.

During the reading of this valuable paper, a motion was made and unanimously adopted, "that the desultory conversation of members be done down stairs."

Dr. Hunt's report was accepted and referred to the Committee on Publication.

A resolution authorizing a committee to be appointed by the chair, for the purpose of obtaining commutation tickets to members over the various railroads at the time this Association was in session, was agreed to.

Dr. Frank H. Hamilton, of Buffalo, N. Y., read an abstract of his report "On the frequency of Deformities in Fractures."

The Doctor enjoined upon the members of the Association to carefully consider some mode of arresting the prosecutions for malpractice, which so frequently occur in our country. He had been informed this morning, that in a district not over forty miles from this city, within a few years past, not less than twelve prosecutions have been made against members of the profession. There was no artisan but the Surgeon who was held accountable for a mere failure, and why was it that this should be? Was it the work of jealous and designing men who are in our practice, who falsely show up the failures of their brethren, and at the same time conceal their own faults? He much feared that a few of such men were among us, but was proud to repeat the remarks of an eminent lawyer, who had said of the profession, "that as a whole none stands by itself so well and nobly."

Is it the fault of the lawyers? Young lawyers with neither money nor morals might have something to do with encouraging prosecutions: Joshua Spencer, an eminent lawyer, said that he had acted as counsel in many cases, but had never instituted a prosecution against any member of the medical profession; nor did he know of any member of the bar who occupied a high position that did; he had ever looked on such prosecutions as *persecutions*.

The members of the profession should interrogate themselves as to the cause of these prosecutions and freely admit to the world the difficulties and imperfections attending Surgery, which had too long been kept concealed. We have heard members of the profession declare they could mend a fractured femur without shortening the limb; this may be an impossibility, and it is disgraceful to make such assertions, because they may not be true, and it is calculated, not only to degrade, but subject us to these prosecutions. Even that city of medical science, Philadelphia, had not produced a book which could instruct physicians how to unite a fractured femur in all cases, without shortening the limb.

The abstract and remarks of Dr. Hamilton excited great interest; on motion the report was accepted and referred to the Publishing Committee.

Dr. Chas. Hooker, of New Haven, read an abstract of his report on "Diet for the Sick," which lays down laws for the government of diet under various diseases, and specifies the particular articles which may be given with benefit.

The Association here took a recess for the purpose of proceeding to Independence Hall--the members forming in line and marching in procession.

Reception at Independence Hall.—On their assembling in the east room of this venerable and venerated hall—the room in which was signed the document which proclaimed us to the world as a free and independent

nation—the chairman of the Committee of Arrangements, Dr. Isaac Hays, introduced the Association to the Mayor of the city in a few appropriate remarks to which his Honor responded as follows:—

[The Address will be inserted in the next number of this Journal.]

AFTERNOON SESSION.

At 1 P. M., the members having returned from Independence Hall, the President called the Association to order.

On motion, the thanks of the Association were tendered to the Mayor of Philadelphia for the very cordial manner in which he had received the Medical Association at Independence Hall, and that a copy of his speech be requested for publication in connection with the proceedings of the Association.

The rules were suspended, when Dr. Thompson of Delaware offered the following preamble and resolutions:—

Whereas, Few subjects of greater interest and importance could be presented to the consideration of the American Medical Association, now representing most of the States and Territories of the Union, than the attainment of a correct medical topography of each, with a history of its prevailing fevers, and the most successful treatment of the same; therefore, be it

Resolved, That with this view and conviction, that this Association now appoint a special committee from each State and Territory represented, of ——— members, whose duty it shall be to report upon its medical topography, epidemic fevers, and the most successful treatment thereof, and that the same shall continue to hold their office for three years.

Resolved, That in the appointment of gentlemen of education and experience in the affairs of their own State, we have the best guarantee that the important objects we seek will be most satisfactorily accomplished; and the profession, as well as the public interest, will thereby be better served.

Resolved, That the committees heretofore appointed by this Association, at its session in Charleston, for a similar object, be, and the same are hereby, discharged.

Dr. Askew of Delaware seconded the resolutions, and moved that they be laid on the table, and made the special order for Thursday, at 10 o'clock.

The motion was agreed to.

The Committee on Publication and the Treasurer submitted their reports, which showed the treasury to have on hand the sum of $ 1115 26.

Dr. Watson offered a resolution providing for the appropriation of $1000 to pay for the stone for the Washington Monument, which was adopted.

Dr. W. I. C. Duhamel of Washington City offered the following preamble and resolutions:—

Whereas, The cause of humanity, and a due regard to public health, imperatively demand the speedy enactment of more stringent quarantine laws to prevent the spread of infectious diseases throughout the country; and

Whereas, Distinguished legislators have co-operated with the medical profession in bringing this important subject to the attention of Congress; therefore

Resolved, That warmly approving of the bill introduced at the last session of Congress, and yet pending, to prevent sickness and mortality on shipboard, we cordially tender the honorable senators of the Special Committee, and others who so ably and earnestly advocated the measure, this expression of our sincere thanks for their unwearied exertions in behalf of the bill recommended by this Association, and yet indulge in the gratifying hope that their efforts in the cause of public welfare and suffering humanity will be crowned with success.

Dr. Mauran, of Providence, Rhode Island, seconded the above, and they were unanimously adopted.

The Secretary read a special report from Dr. Wm. H. Byford of Evans-

ville, Indiana, upon the Pathology and Treatment of Scrofula. This paper gives an account of the nature of the disease, its varieties, causes, effects and treatment. Referred to the Committee on Publications.

Dr. N. S. Davis, of Chicago, presented a report on the "Nutritive Qualities of Milk, and the influence produced thereon by Pregnancy and Menstruation in the Human Female, and by Pregnancy in the Cow; and also on the question whether there is not some mode by which the nutritive constituents of milk can be preserved in their purity and sweetness, and furnished to the inhabitants of cities in such quantities as to supersede the present defective and often unwholesome modes of supply." The report says, that when railroads were opened into the interior of the country, it was said that milk would be furnished to residents of cities in the purity that it was found on farms; but a sufficient time had elapsed to demonstrate that such is not the case. The conveyance of the milk from the farm to the cars, the transit on the railway, and the time lost in its delivery throughout the city, it was clearly shown, had the effect of making it unfit for the nourishment of a child. During the past half century experiments had been made with a view of preserving milk in its pure state, yet it was but recently that a discovery had been made by a gentleman in New York, which was to evaporate the water, and mix with white sugar, which rendered it what is termed solidified milk. In his practice he had used this improved milk for the nourishment of infants, with the most gratifying results, and after having kept it for three months; and he knew of its having been kept twelve months without any injury to its qualities.

The report was referred to the Committee on Publication, and the meeting adjourned.

In the course of the day's proceedings, the Chairman announced that visiting invitations had been extended to the delegation from Prof. Hart, of the Central High School; from the Board of Health, to visit the City Hospital and the Lazaretto, which were accepted with thanks. At 4 o'clock the Association, to the number of five hundred, proceeded in coaches to the reception at Girard College; after which they proceeded to Fairmount.

In the evening they were entertained at the residences of Drs. Wood, A. Stillé, and Paul.

3D DAY.—MORNING SESSION.

The Chair was taken by the President, Dr. Wood, who called the Association to order.

Dr. Isaac Hays, from the Committee of Arrangements, announced that 520 delegates were now enrolled.

Dr. Hays presented an invitation from Dr. Ducachet, of St. Stephen's Church, to visit the church and see the Byrd monument, by Steinhauser. He stated that 12 o'clock at noon, on this day, had been fixed for this visit. The invitation was accepted.

A report was received from the Committee on Publications, adverse to the publication in the *Transactions* of the reports of Special Committees. Referred to a Special Committee of five.

Dr. Frank H. Hamilton, of Buffalo, New York, made some additional remarks on the subject of fractured clavicle. The Doctor expressed an earnest hope that the Managers of the Pennsylvania Hospital would be more exact in making up their reports of the statistics of fractured clavicle, so that we may all be able to judge of the merit of the instrument, which has been used in such cases in that Institution, for thirty years. He had known a surgeon to be mulcted in heavy damages for using that instrument in a case of fractured clavicle, because he could not accomplish all that he supposed he could by using it. He did not wish to speak harshly, but at the same time he called again upon the Managers of that Institution to be more exact in their statistics on the subject of fractured

clavicle, so that the medical faculty may be prevented being a grand Insurance Company for the whole world.

Dr. Thompson, of Delaware, called up his resolutions, offered yesterday, in reference to the appointment of committees on the Medical Topography of the country.

Dr. J. L. Atlee, of Lancaster, said that he noticed Chief Justice Lewis, of Pa., was on the floor of the house—he moved that he be invited to a seat on the platform. The motion was unanimously agreed to.

The Chief Justice was (amid much applause) escorted to the platform and seated on the right of the President.

Dr. Askew, of Delaware, offered as an appendage to the resolutions of Dr. Thompson, the following:

Resolved, That all reports on the Medical Topography and prevailing diseases of States, shall, to entitle them to be received by this Association and published in the proceedings, be first approved by the Medical Societies of the State or Territory where such societies exist, and to which State or Territory such report refers.

Dr. Palmer, of Michigan, advocated the resolutions, and said that, while he was conscious of the difficulties in the way, he thought that great good would result from the appointment of the Committees.

Dr. J. G. Orton, of Binghampton, N. Y., offered the following resolutions:

Resolved, That each County Medical Society (or in parts of the country where such have not been established, any duly organized Medical Association) be requested to amend its Constitution by attaching thereunto the following article: "It shall be the duty of each member of this Society to keep a faithful record of the diseases which may fall under his observation during each month, according to the classification adopted by the American Medical Association in May 1847, stating the age and sex, occupation and nativity of the patient, the average duration of the disease, and finally their recovery or death, and to report the same in writing to the Secretary on or before the first day of February of each year, who shall transmit a digest thereof to the State Medical Society, and also to the appropriate Committee appointed by the American Medical Association for its reception."

Resolved, That each incorporated Hospital, Infirmary and Asylum, be invited to furnish a copy of their annual reports for the use of the Committee of their respective States.

Resolved, That the State Committee appointed by this Association to report on the prevailing diseases of their respective localities, shall receive and arrange a digest of the reports transmitted to them by the Secretaries of the various county Societies, and to report the same at the annual meeting of this Association.

Resolved, That the 1st day of January be the time fixed at which the object of these resolutions shall be carried into effect, and that the several county societies and associations, be requested to amend their Constitutions as heretofore recommended, at as early a date as practicable, and to report to the State Committee their willingness or unwillingness to acquiesce in the request of this Association.

On motion, the resolutions were referred to the Committee on Nominations.

Dr. Thompson, of Delaware, expressed a hope that the committee would go into immediate session, so that a report might be made as soon as possible.

Letters from Drs. Sutton and Benner, on the subject of epidemics, were referred to the Committee on Nominations.

Dr. Condie, of this city, submitted a voluminous report upon the subject of Tubercular Disease, accompanied by a vast array of facts, the gathering of about three years. He stated that the report would make at least 500

printed pages. The opinions advanced, he said, were "very heterodox."

On motion, Dr. Condie was permitted to publish the report in any manner he pleased, without reference to any obligations he may feel due to the Association.

Dr. Brainard, from the Special Committee "On the constitutional and local treatment of Carcinoma," was continued another year.

Dr. Horace Green, from the Special Committee "On the use and effects of applications of Nitrate of Silver to the Throat, either in local or general disease," was also continued another year.

A member from the Committee "On Dysentery," submitted a lengthy report upon the nature and treatment of that disease. Referred to the Committee on Publications.

Dr. Blatchford, of Troy, N. Y., chairman of the Committee "On Hydrophobia," asked the aid of the members of the Association in preparing their report.

The hour of recess having arrived, the members took advantage of invitations to visit the Byrd Monument, in St. Stephen's Church, the Academy of Fine Arts, Academy of Natural Sciences, and the Central High School.

AFTERNOON SESSION.

The Association re-assembled at 1 o'clock.

Dr. Mussey, of Ohio, read an interesting report upon the Use of Alcohol in Health and Disease. It abounded in facts illustrating the effects of alcohol upon the human system, and evinced extensive reading, and a laborious collation of medical testimony. Referred to the Committee on Publications.

Dr. Hays presented an invitation to the Association to visit the Pennsylvania Institution for Idiotic and Feeble-Minded Children, this afternoon. Coaches will be provided to take the members to Germantown. The invitation was accepted.

The Committee on Nominations to which was referred so much of the President's address as relates to the next place of meeting, recommended that no change be made in the place of holding the next annual meeting—which will, consequently, be held at Detroit.

A letter was read from Dr. R. J. Breckenridge, of Ky., chairman of Committee on Medical Literature, announcing that his report was ready, but that he was not able to present it himself, and asking its reference to the Committee on Publications.

Dr. Condie moved, that when received, the report be so referred.

A communication was read from Dr. W. H. Anderson, of Mobile, chairman of Committee on Medical Education, setting forth that his duties requiring an extensive foreign and domestic correspondence, his report was incomplete, but would be ready in season for publication in the *Transactions*.

A motion was made that the report, when received, be referred to the Committee on Publication.

Dr. Davis, of Illinois, hoped that the paper would not be referred without first being read. He was opposed to the principle of referring papers to the Committee on Publications, until the Association had had an opportunity of judging of their merits.

On motion, the Association adjourned, it being 3 P. M.

At 4 o'clock the members of the Association entered coaches and proceeded to the City Hospital, Blockley. They were received by the President of the Board of Guardians, Mr. F. M. Adams, and the Chief Resident Physician, Dr. A. B. Campbell, and conducted through the Hospital and the Almshouse. In the evening, the members of the Association were received

at the residences of Drs. Samuel Jackson, J. Pancoast, Henry Hartshorne, and Mr. Isaac Lea.

4TH DAY.—MORNING SESSION.

The Association assembled at nine o'clock, pursuant to adjournment, Dr. Wood in the chair.

The Secretary read the minutes of yesterday's meeting, which were approved.

Dr. Hays stated that the whole number of names registered now amounted to 523.

Dr. Hayward offered a resolution expressing the thanks of the Association to all who had, by attention and munificent hospitality contributed to the enjoyment of the delegation. Unanimously adopted.

The Committee appointed at St. Louis, to whom had been referred the paper of Dr. Phelps, entitled "Religion an Element of Medicine, or the duties and obligations of the Profession," reported through Dr. J. L. Atlee, who moved that it is inexpedient to publish Dr. P.'s paper in connection with the transactions of the Association.

The report was adopted as the sense of the meeting, and the resolution agreed to.

A member offered a resolution returning thanks to the Directors of the Academy of Fine Arts, for their liberal offer to take charge of the stone for the Washington Monument, and transport it to Washington. Agreed to unanimously.

Dr. N. S. Davis, of Illinois, moved the following preamble and resolutions, which were referred to the Committee of Arrangements, with instructions to report on the same at the commencement of the next annual meeting.

Whereas, The present mode of conducting the annual meetings of the Association affords but little opportunity for the discussion of strictly scientific questions and papers, and *whereas*, this has been regarded as a serious defect in the operation of our organization, impairing its scientific character; therefore

Resolved, That the daily sessions of the Association during each annual meeting be divided into two parts, the first to terminate at an hour not later than 12½ o'clock P. M. of each day, and to be devoted as heretofore, to the general business of the Association. The second part consisting of all the time which it is deemed advisable to remain in session each day, after 12½ o'clock, P. M., to take the character of a scientific section, and to be devoted exclusively to the discussion of questions relating to the science and art of medicine.

Resolved, That the Association, in its capacity of a *Scientific Section*, having no power to act on any subject of a *scientific* character, may continue in session, whenever thought desirable, a longer period than in its more general capacity.

Dr. A. J. Semmes, of Washington, D. C., offered the following, which was adopted:

Resolved, That a committee of three be appointed to report to the Association, at its next annual meeting, what measures should be adopted to remedy the evils existing in the present methods of holding coroners' inquests by incompetent persons, by which the lives and liberties of the innocent may be jeopardized, and the ends of justice frustrated.

Dr. Semmes, of Washington, Dr. Hyle, of Wilmington, and Dr. Condie, of Philadelphia, were appointed.

Dr. J. L. Atlee offered the following resolutions, which were intended to counteract a recent recommendation of the Legislature of Michigan:—

Resolved, That to secure efficient teaching in medical schools, where a prime

object is to enforce practical precepts, a large degree of union and harmony must exist among the teachers, and confidence reposed in them on the part of their pupils.

Resolved, That any such unnatural union as the mingling of an exclusive system, such as Homœopathy, with Scientific Medicine, in a school, setting aside all questions of its untruthfulness, cannot fail, by the destruction of union and confidence, and the production of confusion and disorder, unsettling and distracting the minds of the learners, to so far impair the usefulness of teaching, as to render any school adopting such a policy unworthy the support of the profession.

Dr. A. B. Palmer, of the University of Michigan, in seconding the resolutions, desired permission to offer a few remarks. After briefly stating some of the peculiar features of the incorporation of the University, he went on to say that the institution is under the management of a board of Regents elected by the people, by whom the professors in the various departments of science and art are appointed. The *Legislature* has *nothing to do* with the appointment of professors. During the session of the Legislature the past winter, the admirers of homœopathy had made a special effort, and had succeeded in obtaining a *recommendatory* action on their part, in reference to the establishment of a chair of homœopathy in the University. It had been represented to them, that a large part of the people of Michigan favored that peculiar mode of practice, and that it was but fair that its principles be inculcated in the State University.

The spirit of this recommendation is, and has been resisted, both by the Regents and by the faculty and students of the medical department of the University.

Dr. Palmer wanted an expression of opinion by the Association on this matter. Legislatures should know that Homœopathy and Scientific Medicine should not, and cannot be united in one school—they are incompatible, and neither he or any of his colleagues could, or would continue in any school where such an absurdity was attempted.

Some of the medical journals have given an erroneous impression in regard to this action of the Legislature. The faculty are going to act energetically in this matter, and they ask the Association to co-operate with them in instituting a thorough and systematic inquiry, both in this country and in Europe, into the pretensions and practice of this delusion and imposture, that the minds of the people may be enlightened on the subject. As the friends of Homœopathy in Michigan have raised the issue, the faculty of the University wish to meet it. Circulars of inquiry will soon be sent out, and the faculty hope that they will be promptly responded to.

The doctor repeated the assurance that on no account would the faculty tolerate a Chair of Homœopathy in the University, but that, to a man, they would resign their positions rather than submit to so absurd and humiliating an appointment.

The doctor's remarks were received with evident satisfaction by the members, as was shown by the frequent rounds of applause that greeted him.

Dr. Clendenin, of Ohio, offered the following:—

Resolved, That no State or local Society shall be hereafter entitled to representation in this Association that has not adopted its Code of Ethics.

Resolved, That no State or local Society that has intentionally violated, or discarded any article or clause in the Code of Ethics, shall longer be entitled to representation in this body.

A motion to lay the above on the table was lost.

Dr. Miltenberger, of Baltimore, offered an amendment, which was amended by Dr. J. L. Atlee to read as follows:—

Whereas, It has been brought before the notice of the American Medical Association that the State Medical Society of Ohio has violated, at their last meeting Sec. 4th, Art 1st, Chapter 2d, of its Code of Ethics; therefore be it

Resolved, That the Secretary of the Association be directed to inform the officers of that Society that, unless such action be rescinded, they cannot be hereafter represented in this Association.

These were added to the resolutions of Dr. Clendenin, and adopted unanimously; the delegates from the Society in question, being forward in support of them.

Dr. Alfred Stille offered the following resolutions:—

Resolved, That a Special Committee of five be appointed to report at the next meeting of the Association on the following question; Might not the present system of repeating the same lectures to the same classes, during two successive terms, be usefully modified by extending the lectures of each chair over two sessions, so as to embrace a systematic and complete discussion of each of the following subjects:—

1. Special, Regional, and General Anatomy, including illustrative references to Morbid Anatomy.
2. Inorganic, Organic, and Pharmaceutical Chemistry, and Toxicology.
3. General and Human Physiology; Hygiene; Medical Jurisprudence.
4. Medical Botany; Materia Medica; General Therapeutics.
5. General Pathology; Morbid Anatomy (Systematic); Practice of Medicine.
6. General Surgical Pathology, or Institutes of Surgery; Mechanical, Operative, and Medicinal Surgery.
7. Obstetrics; Diseases of Women; Diseases of Children.
8. Hospital Clinical Medicine and Surgery.

Resolved, That the Committee, at an early day, address the several Medical Colleges, in regard to the proposed plan of instruction, requesting from them an official expression of opinion upon its merits and feasibility.

The Chair appointed the following gentlemen as the Committee, to whom the subject is referred:—

Dr. Alfred Stille, of Philadelphia, Chairman, Prof. Samuel Jackson, Philadelphia, Dr. John Bell, Philadelphia, Dr. John Watson, New York, Dr. J. L. Cabell, Charlottesville, Va.

Dr. Corson, of New York, read a volunteer report on the Influence of Lead on the Heart, which was referred to a special committee of three for examination.

The hour of recess now arrived, and a motion prevailed to dispense with the recess, and remain in session until final adjournment.

Dr. Thomas, of Baltimore, explained a simple method of preparing nitrate of silver for inhalation in diseases of the throat and chest. The apparatus was placed on the table, and, when put in motion, the nitrate of silver was thrown off in an impalpable powder. The subject was referred to a special committee of three.

Dr. Atlee called up a resolution, offered at the last meeting of the Association, directing the especial attention of the Committee on Epidemics to the subject of the contagiousness or non-contagiousness of cholera. The resolution was then adopted.

Dr. Davis said that the Association had returned thanks piecemeal, and he was very much afraid that some of the institutions visited had been overlooked. He moved that the Secretary be instructed to insert the names of any that had been omitted. Agreed to.

AMENDMENTS TO THE CONSTITUTION.

The amendment to the Constitution, proposed by Dr. Gross at the last meeting, providing for the election of officers immediately before the adjournment of the Convention, instead of at its commencement, was called up, and, on motion of Dr. Davis, it was indefinitely postponed.

The amendment to the Constitution, providing that the Association meet on the second, instead of the first Tuesday in May, was called up, and its approval advocated by several of the New York delegation. A motion for indefinite postponement was agreed to.

Dr. Davis called up an amendment to the Constitution, offered at the last meeting, dispensing with the Nominating Committee, and then moved that it be indefinitely postponed. Agreed to.

The amendment to the Constitution, to change the title of "Committees on *Epidemics*" to "Committees on *Prevalent Diseases*," was, on motion, indefinitely postponed.

A member offered an amendment to the Constitution, by which the Recording Secretary and Treasurer of the Association are made permanent officers, and their travelling expenses directed to be paid. Laid over under the rule.

The following amendment to the Constitution was offered and laid over until the next meeting; "Any permanent member, who shall not pay for the published *Transactions* for three successive years, shall be considered as having withdrawn."

An amendment was offered to the Constitution, changing the name of the Association to that of "National Medical Congress," and providing that at least one meeting in three years be held in Washington, D. C. Laid over under the rule.

An amendment to the Constitution was offered, to the effect that Medical Societies which do not adopt the Code of Ethics, shall not be considered "in good standing." Laid over under the rule.

Dr. L. D. Scheetz, of Ohio, presented the following:—

Whereas, It has been found necessary to adopt some means of elevating the standard of education, both *professional* and *general*, among medical men, by those who are best acquainted with the sad and lamentable deficiency which prevails in this respect among a large mass of the profession, and particularly in the Western States; and *whereas*, efforts to this effect at home have been opposed on the ground that more was exacted by such as took an active part in the matter than is required by the "American Medical Association;" and *whereas*, it is believed that the National Society can exert a beneficial influence over the whole country; therefore,

Resolved, That the Constitution of this Association be so amended as to require all delegates, before being allowed a seat in said Association, to satisfy the proper authorities that the societies which they represent, require *graduation* as a *sine qua non* to membership therein; and that no person can become a *permanent member*, a *member by invitation*, or can be received as a delegate from any other body, unless he *be a graduate* of some respectable school.

Resolved, That the editors of the various medical journals of the United States be requested to publish the foregoing, so that an interest may be awakened upon this subject, and that Societies may be prepared to comply with the above requisitions, in case they meet the approval of this association. Laid over under the rule.

The Committees for the present year were then reported by the Committee on Nominations, and the Association adjourned to meet in Detroit, on the first Tuesday in May 1856.

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